



What and why

- The lifetime risk of developing atrial fibrillation (AF) from the age of 55 years is 1 in 3. The opportunistic detection in high-risk individuals can play a part in identifying undiagnosed AF.
• AF is one of the leading risk factors for developing a stroke.
• AF strokes are associated with significantly higher mortality, morbidity and disability than other strokes. People who survive them are often left with little meaningful independence.
• The reduction in face-to-face consultations during COVID-19 restrictions has presented great challenges in the detection of AF.
• The way the diagnosis is communicated can set the scene for how the person relates to their condition.
• For most people with AF, a direct-acting oral anticoagulant (DOAC) as the first-line option is highly effective for stroke prevention (NICE, 2021).

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Citation: Javaid Y (2021) How to identify and manage atrial fibrillation. Diabetes & Primary Care 23: 177-9

Identifying atrial fibrillation in people living with diabetes

- We should think of the AF pathway as a race to screen, diagnose and start anticoagulation before stroke occurs. Too often, stroke is the first presentation of AF, despite there being opportunities to identify AF as part of routine clinical care. With little disruption to patient flow, we have a great opportunity to reduce the rates of catastrophic cardiovascular events and the human, health and social care costs associated with them.
• COVID-19 restrictions have led to innovative working practices and a desire to make every patient contact constructive. Vaccination clinics provide opportunities for detection without

requiring additional patient attendance.

- Pulse checks are a quick, cheap and effective way of ruling out persistent AF. Portable ECG devices are highly efficient and effective diagnostic tools. People can be taught to check their own pulse.
• Age is the greatest risk factor for developing AF.
• Opportunistic detection should also be considered as part of the routine reviews for diabetes, hypertension, heart failure and coronary disease. People with obstructive sleep apnoea are at particularly high risk of developing AF.
• Individuals found to have an irregular pulse should be offered a timely 12-lead ECG to confirm or refute a diagnosis of AF.

Stroke prevention

- Non-valvular AF relates to people who do not have significant mitral stenosis or a metallic heart valve. Patients with significant mitral stenosis or a metallic heart valve should be given warfarin (without the requirement to perform a CHA2DS2-VASc assessment).
• The vast majority of people with diabetes should be offered anticoagulation when AF is diagnosed.
• For a person with AF, calculate the CHA2DS2-VASc score to determine stroke risk. Diabetes adds 1 to the score in a person with non-valvular AF. Use the ORBIT score to quantify bleeding risk (NICE, 2021). These scores should inform discussion with the person and facilitate shared decision-making.
• Bleeding risk scores, such as ORBIT, should not be used to exclude people from anticoagulation, but to help inform a patient-

centred discussion on risks and benefits. It is likely that once the CHA2DS2-VASc is 1 or more in a male or 2 or more in a female, the benefit of anticoagulation will outweigh the risk, whatever the bleeding risk score.

- All people with diabetes with a score of 1 (theoretically only possible if a male and no other risk factors) should be considered for anticoagulation.
• All people with diabetes with a score of 2 or more should be offered anticoagulation.
• DOACs are the preferred first-line option for anticoagulation in non-valvular AF. Warfarin (a vitamin K antagonist) should only be considered if a DOAC is contraindicated or not tolerated.
• If anticoagulation is contraindicated, consider referral to cardiology or stroke service for assessment for percutaneous occlusion of the left atrial appendage. This is a highly effective alternative to anticoagulation in people with non-valvular AF.

Stroke risk (CHA2DS2-VASc score)

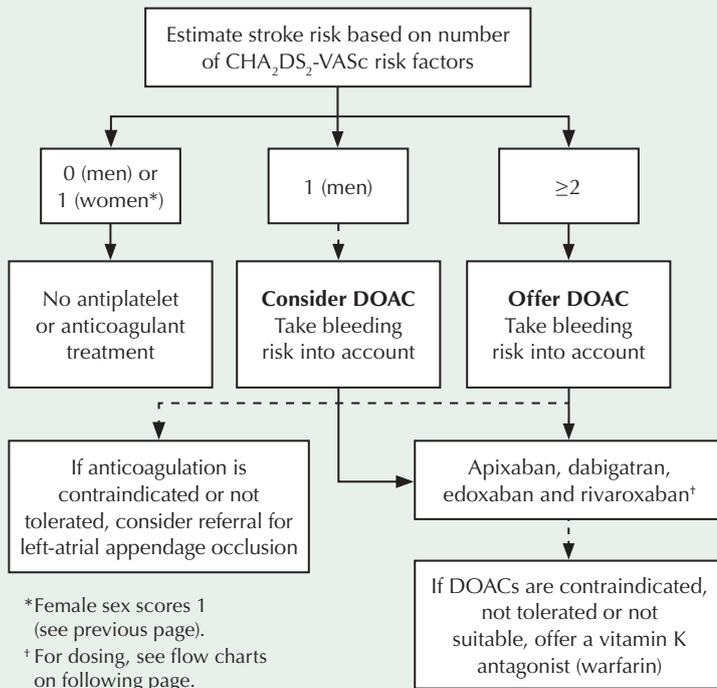
Table with 3 columns: Clinical characteristic, Points. Rows include Congestive heart failure history (1), Hypertension history (1), Age ≥75 years (2), Diabetes history (1), Stroke/TIA/thromboembolism history (2), Vascular disease history (1), Age 65-74 years (1), Sex (female) (1).

Bleeding risk (ORBIT score)

Table with 3 columns: Clinical characteristic, Points. Rows include Hb <13 g/dL or Hct <40% for males (2), Hb <12 g/dL or Hct <36% for females (2), Age >74 years (1), Bleeding history (any previous GI or intracranial bleeding or haemorrhagic stroke) (2), eGFR <60 mL/min/1.73 m² (1), Antiplatelet treatment (1).

Hb=haemoglobin; Hct=haematocrit

NICE guidance on atrial fibrillation



Use CHA₂DS₂VASc score for all people with any of the following:

- Symptomatic or asymptomatic paroxysmal, persistent or permanent AF.
- Atrial flutter.
- Risk of arrhythmia recurrence after cardioversion back to sinus rhythm or catheter ablation.

If DOACs are contraindicated, not tolerated or not suitable, offer warfarin.

All people with AF, whether on anticoagulation or not, should be reviewed at least annually to assess the need for anticoagulation.

For adults with non-valvular AF who are already taking warfarin and are stable, discuss the option of switching treatment at their next routine appointment, taking into account the person's time in therapeutic range.

Rate and/or rhythm control

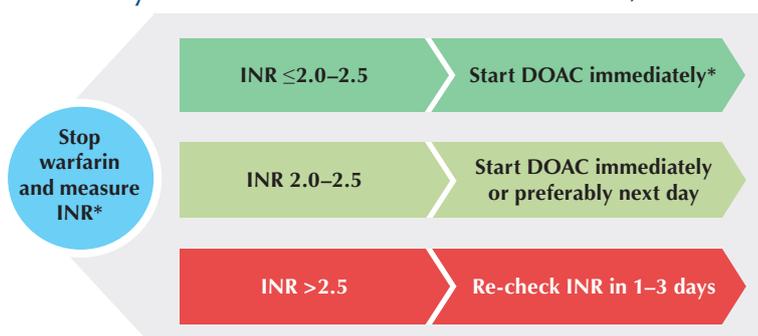
- Rate control should be offered to all people with persistent AF and a resting heart rate >110 bpm, irrespective of symptoms.
- Lenient rate control (<110 bpm at rest) is advised to avoid bradycardic episodes.
- First-line treatment is a standard beta blocker (e.g. bisoprolol [i.e. a beta-blocker other than sotalol]) or rate-limiting calcium-channel blocker (diltiazem* or verapamil). Avoid a calcium-channel blocker if known heart failure with reduced ejection fraction (HFrEF).
- Digoxin can be used as an add-on if monotherapy does not control rate or symptoms.
- Consider referral for assessment for rhythm control (most commonly catheter ablation), particularly for:
 - Symptomatic patients despite rate control.
 - Patients with symptomatic paroxysmal AF.
 - Patients with coexisting HFrEF.

*Off-label use.

AF management checklist

- CHA₂DS₂VASc and ORBIT scores documented annually.
- Clear reason documented if patient not anticoagulated.
- Heart rate <110 bpm.
- Symptom status documented.
- Has referral for assessment for rhythm control been considered in patients who meet the criteria?
- Has echocardiogram been requested (should not delay anticoagulation)?
- Has aetiology been considered (e.g. alcohol, hyperthyroidism)?
- For patients on DOAC:
 - Reinforce the importance of strict adherence due to their short half-life.
 - At least annual full blood count (FBC; 6-monthly if >75 years old) and liver function tests (LFTs).
 - Calculate creatinine clearance using [Cockcroft–Gault equation](#) (CG CrCl). Divide this number by 10 to determine, in months, the approximate timing of the next test (e.g. if CG CrCl=60 μmol/L, then check again in 6 months; if 40, then check in 4 months, etc).
 - **Double check** DOAC has been prescribed at the correct dose at each visit.
- For people on warfarin:
 - Document the time in therapeutic range (TTR) over the past 6 months.
 - If no contraindication, offer to switch to DOAC at the next routine review.

Switching to DOAC from warfarin in atrial fibrillation (European Heart Rhythm Association recommendations)



In line with DOAC SmPCs, stop warfarin and start DOAC when INR:

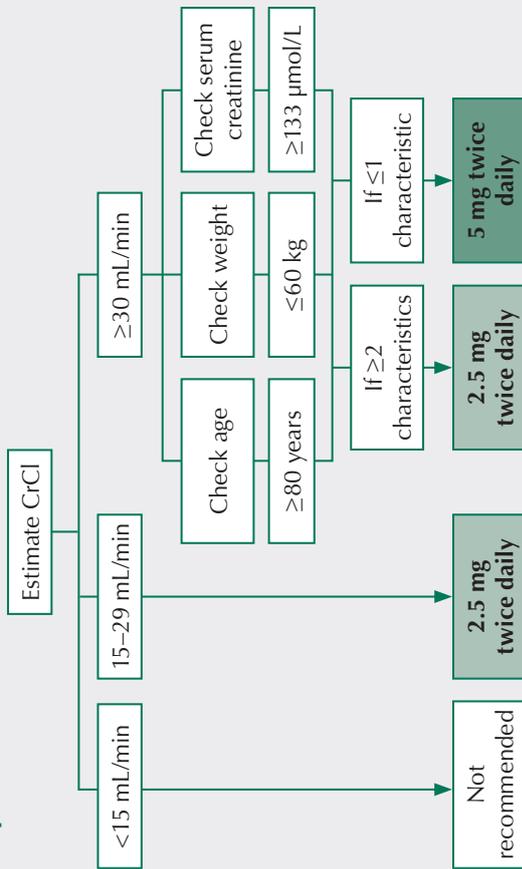
- ≤3 for rivaroxaban
- ≤2.5 for edoxaban
- <2 for apixaban and dabigatran

*On the same day.

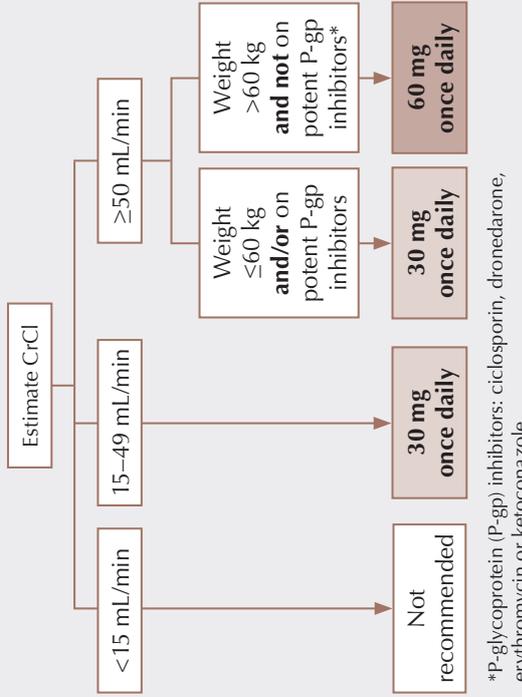
Refer to individual SmPCs for comprehensive guidance on management of switching. DOAC=direct oral anticoagulant; INR=international normalised ratio; Adapted from Steffel et al (2018).

How to dose DOACs in non-valvular AF

Apixaban

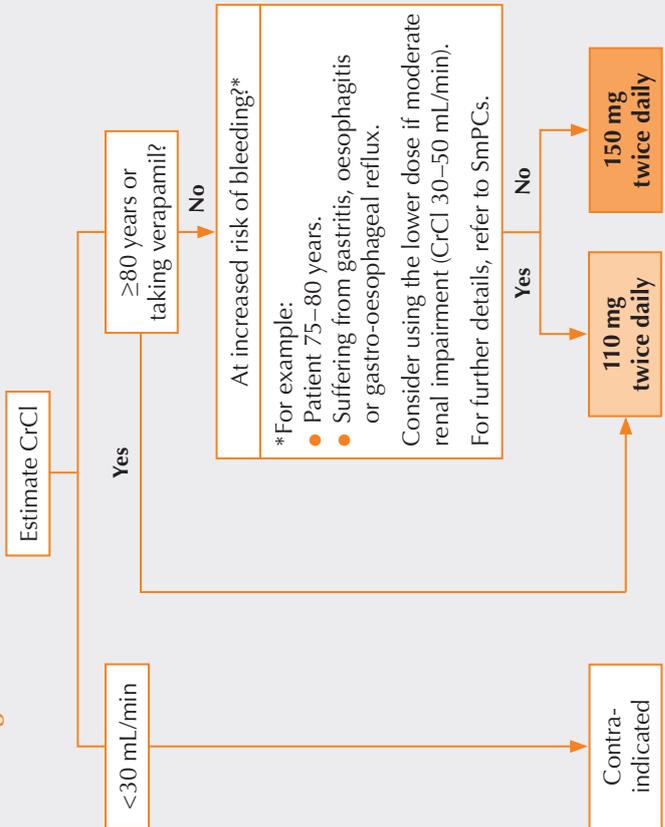


Edoxaban



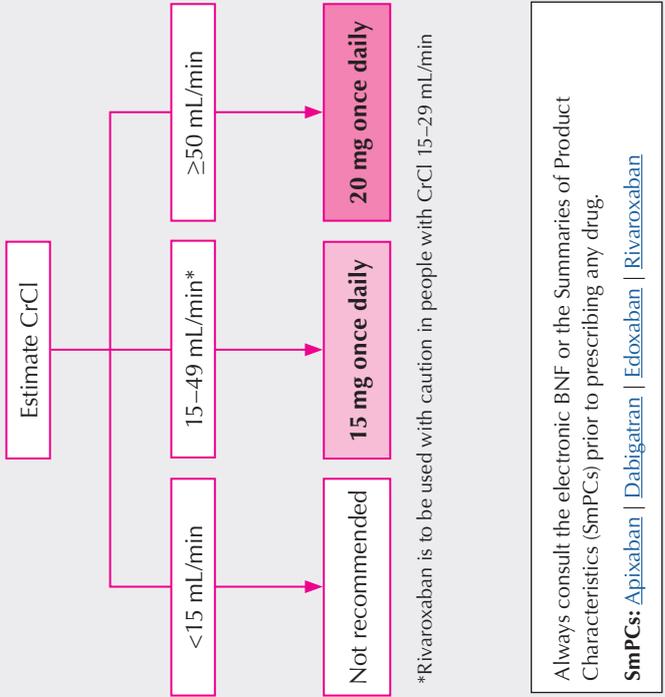
*P-glycoprotein (P-gp) inhibitors: ciclosporin, dronedarone, erythromycin or ketoconazole.

Dabigatran



*For example:
 ● Patient 75–80 years.
 ● Suffering from gastritis, oesophagitis or gastro-oesophageal reflux.
 Consider using the lower dose if moderate renal impairment (CrCl 30–50 mL/min).
 For further details, refer to SmPCs.

Rivaroxaban



*Rivaroxaban is to be used with caution in people with CrCl 15–29 mL/min

Always consult the electronic BNF or the Summaries of Product Characteristics (SmPCs) prior to prescribing any drug.
SmPCs: [Apixaban](#) | [Dabigatran](#) | [Edoxaban](#) | [Rivaroxaban](#)

Patient resources

- AF Association patient information factsheets: www.heartrhythmalliance.org/afa/uk/factsheets

References

- NICE (2021). *Atrial fibrillation: diagnosis and management* (NG196). NICE, London. www.nice.org.uk/guidance/ng196
- Steffel J et al; ESC scientific Document Group (2018) The 2018 European Heart Rhythm Association Practical Guide on the use of non-vitamin K antagonist oral anticoagulants in patients with atrial fibrillation. *Eur Heart J* **39**: 1330–93

Further reading

- Heidbuchel H et al (2015) Updated European Heart Rhythm Association Practical Guide on the use of non-vitamin K antagonist anticoagulants in patients with non-valvular atrial fibrillation. *Europace* **17**: 1467–507
- Hindricks G et al; ESC Scientific Document Group (2021) 2020 ESC Guidelines for the diagnosis and management of atrial fibrillation developed in collaboration with the European Association for Cardio-Thoracic Surgery (EACTS). *Eur Heart J* **42**: 373–498
- Joint Formulary Committee (2016) *BNF 72* (September 2016–March 2017). Pharmaceutical Press, London