



## The 2021 NICE AF guidelines: Key recommendations for tertiary and specialist care

In April 2021, in collaboration with the Royal College of Physicians (RCP), the National Institute for Health and Care Excellence (NICE) published a new guideline on the diagnosis and management of atrial fibrillation (AF) — updating and revising the guideline published in 2014.<sup>1</sup> This report summarises the key recommendations for tertiary and specialist care healthcare professionals.

\* = Denotes recommendation new to 2021

### Detection and diagnosis

- If an irregular rhythm is detected with a manual pulse check, use a 12-lead ECG to confirm the diagnosis in people suspected of having AF whether they have symptoms or not.\*
- If a 12-lead ECG does not detect AF in a person with suspected paroxysmal AF, use a 24-hour ambulatory ECG monitor for further investigations if the person is without symptoms or has symptoms that are less than 24 hours apart.\*
- If a person with suspected paroxysmal AF has symptoms that are more than 24 hours apart, use an ambulatory ECG monitor, event recorder, or other ECG technology for an appropriate period.

### Assessment of stroke and bleeding risks

- Use the CHA<sub>2</sub>DS<sub>2</sub>-VASc stroke risk score to assess the risk of stroke in people with symptomatic or asymptomatic paroxysmal, persistent, or permanent AF, atrial flutter, and a continuing risk of arrhythmia recurrence after cardioversion back to sinus rhythm or catheter ablation.\*
- Assess the risk of stroke (with the CHA<sub>2</sub>DS<sub>2</sub>-VASc stroke risk score) in people with AF who are not taking anticoagulation when they reach the age of 65 and/or if they develop diabetes, heart failure, peripheral arterial disease, coronary heart disease, stroke, transient ischaemic attack, or systemic thromboembolism.
- Use the ORBIT risk score ([click here](#)) to assess the risk of bleeding because it has “higher accuracy in predicting absolute bleeding risk than other bleeding risk tools”. However, “other bleeding risk tools may need to be used until it [ORBIT] is embedded in clinical pathways and electronic systems”.\* Of note, in June 2021, the link to ORBIT was revised so it went to a calculation tool that includes the full list of criteria (including reduced haemoglobin, reduced haematocrit and history of anaemia).
- Discuss both the risk of bleeding and the risk of stroke with the person with AF, considering their individual needs and wants.\*

### Personalised package of care and information

- Offer people with AF a personalised package of care. This should cover stroke awareness and measures to prevent stroke; rate control; assessment of symptoms for rhythm control; who to contact for advice and/or psychological support if needed; and up-to-date and comprehensive education and information on cause, effects, and possible complications of anticoagulation, rate treatment, and rhythm management.

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- To support adherence and ensure safe and effective medicines use in people with AF, follow the recommendations in NICE's guidelines on medicines adherence and medical optimisation.

### Stroke prevention

- For most people, the benefit of anticoagulation (to protect against AF-related stroke) outweighs the risk of bleeding. However, this may not always be the case for people at increased risk of bleeding.\* Therefore, careful monitoring of the risk of bleeding is important.
- A direct-acting oral anticoagulant (DOAC) is the first-line therapy to protect against AF-related stroke in people with a CHA<sub>2</sub>DS<sub>2</sub>-VASc score of 2 or above (taking account of the risk of bleeding). Apixaban, dabigatran, edoxaban, and rivaroxaban are all (equally) recommended but should be used in line with their respective NICE technology appraisal guideline.\*
- Consider offering anticoagulation with a DOAC in men with CHA<sub>2</sub>DS<sub>2</sub>-VASc score of 1 or above (taking account of their risk of bleeding).\*
- When choosing between anticoagulants, following the recommendations in the NICE guideline on shared decision-making and, to support patient adherence to medications, follow the recommendations outlined in the 2015 NICE guideline on medical optimisation.
- If a person is already taking a vitamin K antagonist, and is stable, discuss the option of switching therapy at their next routine appointment.\*
- If a person has contraindications to a DOAC, or a DOAC is otherwise unsuitable, offer a vitamin K antagonist.\*
- Do not offer anticoagulation to protect against AF-related stroke to people with a very low risk of stroke (CHA<sub>2</sub>DS<sub>2</sub>-VASc score of 0 for men or 1 for women). However, do not withhold anticoagulation solely because of age and/or their risk of falls.\*
- Do not stop anticoagulation solely because AF is no longer detectable as decisions to stop anticoagulation should be based on a reassessment of stroke and bleeding risk (using CHA<sub>2</sub>DS<sub>2</sub>-VASc and ORBIT) and a discussion of the person's preferences.
- Consider left atrial appendage occlusion (LAAO) if anticoagulation is contraindicated or not tolerated and discuss the benefits and risks of LAAO with the person with AF.

### Rate and rhythm control

#### Rate control

- Rate control is the first-line treatment strategy for people with AF except for those with a reversible cause; those who have heart failure thought to be primarily caused by AF; those with new-onset AF; those with atrial flutter whose condition is considered suitable for an ablation strategy to restore sinus rhythm; or for whom a rhythm-control strategy would be more suitable based on clinical judgement.
- Use a standard beta-blocker (not sotalol) or a rate-limiting calcium-channel blocker as initial rate-control monotherapy. Base the choice of drug on the person's symptoms, heart rate, comorbidities, and preferences.

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- Consider using digoxin monotherapy for initial rate control for people with non-paroxysmal AF if the person does no or very little physical exercise or if other rate-limiting drug options have been ruled out because of comorbidities or the person's preferences.\*
- For people with concomitant heart failure, follow the recommendations outlined in the 2018 NICE guideline on heart failure on the use of beta-blockers and calcium channel blockers.\*
- In people presenting acutely with suspected concomitant acute decompensated heart failure, seek senior specialist input on the use of beta-blockers and do not use calcium-channel blockers.\*

#### *Rhythm control*

- Consider pharmacological and/or electrical rhythm control for people with AF whose symptoms continue after heart rate has been controlled or for whom a rate-control strategy has not been successful.
- For people having cardioversion for AF that has persisted for longer than 48 hours, offer electrical (rather than pharmacological) cardioversion.
- If drug treatment is unsuccessful, unsuitable, or not tolerated in people with symptomatic paroxysmal or persistent AF, consider radiofrequency point-by-point ablation.
- If radiofrequency point-by-point ablation is unsuitable, consider cryoballoon ablation or laser balloon ablation.\*
- When considering left atrial ablation, discuss the risks and benefits and consider the person's preferences. Explain that ablation is not always effective, and that the resolution of symptoms may not be long-lasting.\*
- Consider left atrial surgical ablation at the same time as other cardiothoracic surgery for people with symptomatic AF.\*
- Consider antiarrhythmic drug treatment for three months after left atrial ablation to prevent recurrence, considering the person's preferences, and the risks and potential benefits.\*
- Reassess the need for antiarrhythmic drug treatment at three months after left atrial ablation.\*

#### **Management for people presenting acutely with AF**

- Perform emergency electrical cardioversion in people with life-threatening haemodynamic instability caused by new-onset AF.
- In people with new-onset AF who do not have life-threatening haemodynamic instability, offer rate or rhythm control if symptom onset is less than 48 hours. Offer rate control if symptom onset is more than 48 hours and/or is uncertain.
- In people with AF presenting acutely with suspected concomitant acute decompensated heart failure, seek senior specialist input on the use of beta-blockers and do not use calcium-channel blockers.\*

#### **Preventing and managing postoperative AF**

- In people having cardiothoracic surgery, reduce the risk of postoperative AF by offering amiodarone; a standard beta-blocker; or a rate-limiting calcium-channel blocker.

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- Do not offer statins solely to prevent postoperative AF in people undergoing cardiothoracic surgery. However, if they are already on statins, do not discontinue them.\*
- Consider either a rhythm-control or rate-control strategy for the initial treatment of the new-onset postoperative AF after cardiothoracic surgery.\*

#### References

1. NICE. Atrial fibrillation: diagnosis and management. NG196 2021: <https://www.nice.org.uk/guidance/ng196> [Date accessed 18 June 2021].