

Atrial fibrillation – NICE 2021 update and the focus on anticoagulation

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Introduction

The National Institute for Health and Care Excellence (NICE) released an updated Atrial Fibrillation (AF) guideline in April 2021.¹ Here we provide an overview of the key changes relevant to primary care, which are also covered in [RCGP Essential Knowledge Updates \(EKU\) e-learning](#). We focus on stroke and bleeding risk assessment, choice of anticoagulation and advice on remote monitoring and AF detection.

Atrial fibrillation diagnosis

Diagnosis of AF can be challenging as patients may be asymptomatic or have intermittent or non-specific symptoms and signs. For example, less than half of people with AF have palpitations. This may be of particular concern during the COVID-19 pandemic, with less opportunistic detection of AF and altered patterns of patients accessing healthcare. A Danish registry study reported a 47% decrease in the incidence of newly diagnosed AF between the first three months of 2020 compared to 2019.²

Although the sensitivity of manual pulse palpation to exclude permanent AF is good (93-100%), the positive predictive value of an irregular pulse is between 8-23%.³ The value of opportunistic screening for AF via pulse palpation is also uncertain, even among high risk populations.⁴

The emphasis remains on using a 12 lead ECG to diagnose AF. However, people with intermittent symptoms may need ambulatory monitoring to detect paroxysmal AF. A variety of monitors are now available, including the more traditional external Holter-type devices, newer 'patch' monitors that can record for up to two weeks whilst allowing all activities of daily living with the device on, or event recorders, which are patient activated. Feasibility studies suggest many patients might be able to fit ambulatory monitors themselves at home and prefer to do so. This could enable more remote assessment, which may be particularly helpful during the COVID-19 pandemic or in people with poor mobility. The type of device should reflect the frequency and duration of symptoms. Extended monitoring may only be available via referral to secondary care but should be considered if there is a high index of

suspicion for AF and symptoms are unlikely to be captured on a 24-hour monitor. Where available, diagnostic hubs or rapid referral arrhythmia clinics may improve access to extended monitoring, but evaluations of their clinical and cost-effectiveness are limited to date.⁵

A range of further devices are publicly available with the potential to diagnose AF, including the AliveCor Kardia and Apple iWatch. Subsequent to the full AF guideline, NICE have published a technology appraisal supporting the use of AliveCor Kardia for diagnosis of AF in people with suspected paroxysmal AF. Such devices should be used in conjunction with a confirmatory ECG if possible but can be helpful in capturing people with infrequent symptoms.⁶

An echocardiogram is not required in all new cases of AF, but can be helpful if there is suspected valve disease (e.g. a new murmur), evidence of heart failure or left ventricular systolic dysfunction, or in stroke risk classification.

Stroke and bleeding risk scores

NICE continue to recommend using the CHA₂DS₂VASc tool for stroke risk prediction. A score of 2 or more is considered high risk and anticoagulation should be offered, unless there is a contraindication. Absolute contraindications to anticoagulation are rare but include a recent major haemorrhage or a significant clotting disorder. In such cases, a left atrial appendage occlusion device may be considered via secondary care.

Bleeding risk scores can help to identify those at higher risk to consider potential interventions. They are not intended to identify people who should not receive anticoagulation. A significant change is that NICE now recommend clinicians use the ORBIT score (see Table 1) instead of HAS-BLED. This change was informed by head-to-head comparisons, which identified that the ORBIT score may be better at identifying those who are truly at low risk of bleeding.⁷ This result has not been replicated in all studies and both risk scores only have modest predictive ability.⁸ There is significant cross over between the

two scores, with age, renal disease and use of antiplatelets included in both. HAS-BLED may offer advantages in helping clinicians consider a wider range of reversible bleeding risk factors, such as poorly controlled hypertension or alcohol use.

Choice of anticoagulant

Another key change is that NICE now recommend direct oral anticoagulants (DOACs) in preference to vitamin K antagonists, such as warfarin. Initial randomised trial data demonstrated the DOACs were at least equivalent to warfarin in terms of stroke prevention, and with a lower risk of major haemorrhage. Subsequent analyses have demonstrated that the stroke risk reduction is in fact greater for DOACs compared to warfarin. For example, a network meta-analysis reported the odds ratio for stroke or systemic embolism for apixaban 5mg BD compared to warfarin with INR 2.0-3.0 was 0.79 (95%CI 0.66 – 0.94).⁹ The stroke risk reduction for people taking warfarin also relies on a stable INR to achieve a high proportion of 'time in therapeutic window'. NICE now go as far as to suggest people established on warfarin should be invited to discuss switching to a DOAC. Historically, more than a third of people with AF were not prescribed an anticoagulant, with improvements in treatment a key aim of the NHS Long Term Plan. The increasing availability of DOACs may help in this area as well as reducing variation in care and improving patient outcomes.

Initially, NICE had limited their recommendation to the use of apixaban and dabigatran. However, there is a lack of head-to-head comparisons between DOACs and so following consultation, the final guideline allows clinicians to decide on a DOAC most appropriate for their individual patient, taking into account local guidance. Patient factors to consider include the need for a once daily medication, the need for a dosette box and co-morbid disease, e.g. renal disease. Key exclusions for DOAC treatment specific to AF include moderate to severe mitral valve disease and rheumatic valve disease and metallic valves, in part because these patients have largely been excluded from clinical trials of DOACs to date.

Rate versus rhythm control

NICE recommend rate control treatment first-line for most people with AF, using either a beta-blocker or rate-limiting calcium channel blocker. Calcium channel blockers should be avoided in people with heart failure. Indications for rhythm control include new onset AF

within the past 48 hours, AF with haemodynamic instability or persistent symptoms despite adequate rate control.

Most studies comparing rate versus rhythm control have reported no significant difference in outcomes. However, a 2020 open, blinded-outcome trial randomised 2,789 people with AF diagnosed in the past year and comorbid cardiovascular disease to either usual care or rhythm control with antiarrhythmic drugs or ablation.¹⁰ They reported a 20% reduction in the primary outcome of death, stroke or serious adverse events in the rhythm control group at 5 years follow-up (HR 0.79, 95%CI: 0.66-0.94).¹⁰ Whilst these results suggest some patients may benefit from early rhythm control intervention, a high proportion of the included patients were asymptomatic or in sinus rhythm and all had relatively new onset AF. It is yet to be established how reproducible these results will be outside of a trial setting and NICE have not changed their guidance on the basis of this study.

ABC approach

There is a growing appreciation that AF is a marker of vascular risk, rather than a stroke risk factor alone. NICE recommend clinicians offer a 'personalised package of care and information' to patients, including advice on symptom control, psychological support if required and a holistic approach to assess stroke risk, including blood pressure control and anticoagulation. There is evidence that suggests all-cause death or hospitalisation for people with AF can be improved by focusing on an 'ABC' approach to care: Avoiding stroke (A) with anticoagulation, Better symptom management (B) via close patient review and Comorbidity risk optimisation (C), considering factors such as body weight, blood pressure, interventions for sleep apnoea, diabetes and heart failure.¹¹

Conclusions

Key changes in the new NICE guideline support a move to DOACs as the first line anticoagulant for most patients, using the ORBIT tool for bleeding risk assessment and taking a more holistic view of cardiovascular and stroke risk in patients with AF. GPs are well placed to deliver such interventions for most patients but should aim to identify people with poorly controlled symptoms on rate control treatment or those with comorbid disease, such as heart failure, who may benefit from referral to secondary care.

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Conflicts of Interest

TR is Associate Editor for the BJGP. NJ is a writer for RCGP Essential Knowledge Updates (EKU) e-learning and wrote the ECU 2021.3 module on atrial fibrillation. TR is clinical lead for the ECU programme.

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