Atrial fibrillation (AF) is a common and serious condition, affecting at least 1.8% of the population, rising to over 6% in people aged above 65 years. As the population ages, prevalence is increasing. People with AF are five times more likely to have a stroke and have an increased risk of premature death, resulting in enormous personal, social and economic cost. Prevention of stroke is the main aim of management. Standard treatment involves oral anticoagulant (OAC) drugs – usually warfarin but there are new drugs available. AF is under-diagnosed and the use of OACs is inadequate. There is an urgent need to improve diagnosis and to encourage better uptake and adherence to OACs.

Our key recommendations are:

- Detection of AF must be improved; a national screening programme should be introduced.
- Uptake of OAC must be increased and methods of engaging patients in their AF management should be improved.
- Aspirin should not be used for stroke prevention in AF.
- In relation to rate and rhythm control for AF, relief of symptoms should be the goal of treatment.

**HOW CAN WE BEST DETECT AF?**

- Detection and thromboprophylaxis of AF should be a NHS priority for the prevention of disabling cardioembolic stroke with all its consequences for individuals and for health and social care resources.
- Screening for AF in people of 65 or older satisfies the UK National Screening Committee criteria for a screening programme and such a national screening programme should be undertaken in the UK.
- The most cost-effective method for the detection of AF in primary care is by opportunistic screening of people aged 65 years or older by radial pulse checking followed as soon as practicable by a 12-lead ECG for those with an irregular pulse.
- Use of a single lead ECG recording at the time of symptoms can help in diagnosis but does not replace the need for a 12-lead ECG.
- Diagnostic ECGs should be analysed by a competent individual supported by audit and feedback.
- Where clinical suspicion of paroxysmal AF exists, including after ischaemic stroke or transient ischaemic attack (TIA), longer ECG monitoring periods (at least 24 hours) or event recorders should be used.

**SHOULD THE TREATMENT OF AF BE TARGETED TOWARDS CONTROL OF RHYTHM, RATE OR BOTH?**

- In relation to rate and rhythm control for AF, relief of symptoms should be the goal of treatment. The risks and benefits of individual treatments should be considered and discussed with the patient.
- Drug therapy with a beta-blocker remains the standard first-line treatment for relief of symptoms. For patients with persistent AF, treatment should aim to achieve a resting heart rate of <100 beats per minute. Patients who remain symptomatic should be referred to a specialist for consideration of other antiarrhythmic strategies.
- Elective electrical cardioversion is useful in selected patients but the recurrence rate of AF is high. OAC should be continued post-cardioversion dependent upon calculated stroke risk.
- Procedures, such as left atrial catheter ablation, should be considered in patients who remain symptomatic despite anti-arrhythmic drug treatment.
- Currently there is not enough evidence that ablation improves prognosis (e.g. reduces stroke or mortality) to recommend it as first-line treatment, or in asymptomatic patients. There is a need for further evidence in this area.
- There is evidence that ablation has a higher success rate in maintaining normal heart rhythm in patients who are younger or who have paroxysmal AF.
- AF may recur after ablation; OAC should be continued post-ablation dependent upon the calculated stroke risk.
WHAT IS THE MOST EFFECTIVE AND SAFEST DELIVERY OF THROMBOPROPHYLAXIS IN AF?

- All patients with AF should have a formal stroke risk assessment using a scoring tool such as CHA₂DS₂-VASc.
- Low risk patients (CHA₂DS₂-VASc=0) should not receive long-term thromboprophylaxis.
- Patients with paroxysmal, persistent or permanent AF who are over the age of 65 or who have any risk factor for stroke should be considered for OAC.
- Women under 65 years with AF and no other stroke risk factors have a relatively low stroke risk and thromboprophylaxis would not usually be recommended for this group.
- Aspirin should not be used for stroke prevention in AF as it is ineffective; patients who are taking aspirin solely for this purpose should be reviewed.
- The combination of aspirin plus clopidogrel reduces ischaemic stroke risk in AF but this is offset by a risk of serious bleeding. Therefore this combination is not recommended for thromboprophylaxis in AF.
- Before starting an OAC it is important to assess the risks and benefits of treatment, including an assessment of cognition and comorbidities. Use of the HAS-BLED tool can help identify modifiable bleeding risks which need to be addressed but should not on its own be used to exclude patients from OAC therapy.
- Anticoagulation should be with either well-controlled warfarin (currently standard treatment) or one of the new OACs.
- Newer OACs (direct thrombin and factor Xa inhibitors) are an option for patients who cannot tolerate, have an allergy to, or who cannot achieve satisfactory anticoagulant control on warfarin.
- All patients with AF should have the risks and benefits of OAC assessed annually.
- All providers of anticoagulation services should provide annual data of TTR (time in therapeutic range) as a means of quality improvement.
- Anticoagulant control may be improved by near patient testing and engaging patients in their own care; patient education should be supported at every stage.
- High risk patients in whom all OACs are contraindicated may be considered for a left atrial appendage occlusion device.

WHAT ARE THE DIFFERENCES BETWEEN PHYSICIAN AND PATIENT EXPECTATIONS WITH REGARD TO THE MANAGEMENT OF AF?

- Doctors under-prescribe OAC often assuming patients are not willing or able to take these drugs safely. This should be addressed.
- Patients presenting with AF should have their beliefs and expectations about the condition and treatments fully explored.
- Patients should be allowed time to consider the treatment options, having been given appropriate written and verbal information, before a decision to treat or not is made.
- If a patient declines a recommended treatment, consideration should be given to revisit the decision in the future.
- Patients and carers should be provided with appropriate information and education and involved in shared decision making.
- More research with healthcare professionals and patients is required to better understand and overcome the barriers to optimal use of OAC.
- We recommend the development of decision support aids involving professionals, patients and patient organisations. This should facilitate the discussion of the risks and benefits of OACs with patients and their families/carers.