A summary of prescribing recommendations from NICE guidance

**Atrial Fibrillation**  
**NICE CG180: 2014**

This guideline covers the management of AF in adults (≥18 years) and includes people with paroxysmal (recurrent), persistent and permanent AF and atrial flutter, but does not apply to people with congenital heart disease precipitating AF.

### Definition of terms
- **AF**: atrial fibrillation
- **HF**: heart failure
- **INR**: international normalised ratio
- **TTR**: time in therapeutic range
- **ECG**: echocardiogram

### Personalised package of care – see NICE pathway

#### Assessment and diagnosis

**Suspected AF**
- Perform manual pulse palpation to assess for the presence of an irregular pulse that may indicate underlying AF in people presenting with any of the following:
  - breathlessness, palpitations, syncope/dizziness, chest discomfort, stroke/transient ischaemic attack.
- Perform an ECG in all people in whom an irregular pulse has been detected.
- In people with suspected paroxysmal AF undetected by standard ECG recording use:
  - a 24-hour ambulatory ECG monitor in those with suspected asymptomatic or symptomatic episodes <24 hours apart,
  - an event recorder ECG in those with symptomatic episodes >24 hours apart.

For further assessment – see NICE pathway

#### Assess stroke risk
- Use the CHA₂DS₂-VASc stroke risk score for assessment in people with:
  - paroxysmal, persistent or permanent AF,
  - atrial flutter,
  - a continuing risk of arrhythmia recurrence after cardioversion back to sinus rhythm.

**Assess bleeding risk**
- Use the HAS-BLED score to assess bleeding risk in people who are starting or have started anticoagulation. Offer modification and monitoring of the following risk factors:
  - uncontrolled hypertension,
  - poor control of INR (‘labile INRs’),
  - concurrent medication, e.g. concomitant use of aspirin or a non-steroidal anti-inflammatory drug,
  - harmful alcohol consumption.

#### Stroke prevention
- **Do NOT** offer stroke prevention therapy to people at **very low risk of stroke** i.e. adults <65 years with AF and no risk factors other than their sex (CHA₂DS₂-VASc score of 0 for men or 1 for women).
- **Do NOT** offer aspirin monotherapy solely for stroke prevention.

#### Anticoagulation
- **Discuss** the benefits and risks of anticoagulation, explain:
  - for most people the benefit outweighs the bleeding risk,
  - for people with an increased risk of bleeding the benefit may not always outweigh bleeding risk, and careful monitoring is important,
  - options for anticoagulation; base choice on the person’s clinical features, preferences and bleeding risk.

  - Choices include: apixaban, dabigatran etexilate, rivaroxaban or a vitamin K antagonist e.g. warfarin.
  - Offer anticoagulation to adults with a CHA₂DS₂-VASc score of ≥2.
  - Consider anticoagulation for men, with a CHA₂DS₂-VASc score of 1.
  - **Do NOT** withhold anticoagulation solely because the person is at risk of falls.
  - Decide which anticoagulant to use after an informed discussion about risks and benefits of newer oral anticoagulants compared with warfarin.
  - For people already taking warfarin, consider the potential risks and benefits of switching to another oral anticoagulant in light of their level of INR control.

**Apixaban, rivaroxaban, dabigatran**
- Newer oral anticoagulants are recommended as an option for preventing stroke and systemic embolism in people with nonvalvular AF with one or more risk factors in **Box 1**. See NICE TA275; NICE TA256; NICE TA249

**Box 1**
- **Apixaban/Rivaroxaban**
  - previous stroke or transient ischaemic attack,
  - age ≥75 years,
  - hypertension,
  - diabetes mellitus,
  - HF.
- **Dabigatran**
  - previous stroke, transient ischaemic attack or systemic embolism,
  - left ventricular ejection fraction <40%.
  - symptomatic HF of New York Heart Association class 2 or above,
  - age ≥75 years,
  - age >65 years with one of the following: diabetes mellitus, coronary artery disease or hypertension.

**Left atrial appendage occlusion**
- If anticoagulation is contraindicated or not tolerated:
  - consider left atrial appendage occlusion. See NICE pathway

#### Monitoring

**Warfarin**
- Calculate the person’s TTR at each visit:
  - use a validated method of measurement such as the Rosendaal method for computer-assisted dosing or proportion of tests in range for manual dosing.
  - exclude measurements taken during the first 6 weeks of treatment.
  - calculate TTR over a maintenance period of at least 6 months.
- Reassess a person with poor anticoagulation control shown by any of the following:
  - two INR values >5 or one INR value >8 within the past 6 months,
  - two INR values <1.5 within the past 6 months,
  - TTR less than 65%.

*See Summary of Product Characteristics for full prescribing information.*
• Take into account and address factors that may contribute to poor anticoagulation control: cognitive function, adherence to prescribed therapy, illness, interacting drug therapy and lifestyle factors including diet and alcohol consumption.
• If poor anticoagulation control cannot be improved, evaluate and discuss the risks and benefits of alternative stroke prevention strategies.

Treatment of arrhythmia

First-line: Rate control
• Offer rate control, except in people:
  ➢ whose AF has a reversible cause,
  ➢ who have HF thought to be primarily caused by AF,
  ➢ with new-onset AF,
  ➢ with atrial flutter whose condition is considered suitable for an ablation strategy to restore sinus rhythm,
  ➢ for whom a rhythm control strategy would be more suitable based on clinical judgement.
• Offer monotherapy with a beta-blocker* (NOT sotalol), OR a rate-limiting calcium-channel blocker e.g. diltiazem.**
• Base choice on the person's symptoms, heart rate, comorbidities and preferences.
• Consider digoxin* monotherapy for people with non-paroxysmal AF only if they are sedentary.
• If monotherapy does not control symptoms thought to be due to poor ventricular rate control, consider combination therapy with any two of: a beta-blocker, diltiazem, digoxin.
• Do NOT offer amiodarone for long-term rate control.

Second-line: Rhythm control
• Consider pharmacological and/or electrical rhythm control for people whose symptoms continue after heart rate has been controlled or if a rate control strategy was not successful.

Cardioversion
• Offer electrical cardioversion for people with AF that has persisted for >48 hours – see NICE pathway
• Consider amiodarone starting 4 weeks before and continuing for up to 12 months after electrical cardioversion to maintain sinus rhythm. Discuss the benefits and risks of amiodarone with the person.

Long-term rhythm control
• Assess need for drug treatment taking into account the person's preferences, associated comorbidities, risks of treatment and likelihood of recurrence of AF.

First-line: beta-blocker** (NOT sotalol)
• If beta-blockers are contraindicated or unsuccessful, assess the suitability of alternative drugs, taking comorbidities into account.
• Consider use of:
  ➢ dronedarone* after successful cardioversion in people with paroxysmal or persistent AF – see NICE TA197
  ➢ amiodarone for people with left ventricular impairment or HF.
• Do NOT offer class 1c antiarrhythmic drugs such as flecainide or propafenone to people with known ischaemic or structural heart disease.

*See Summary of Product Characteristics for full prescribing information.
**Beta-blockers licensed to treat AF: atenolol, acebutolol, metoprolol, nadolol, oxprenolol, propranolol.

U Unlicensed indication. Obtain and document informed consent.
*"Pill-in-the-pocket" strategy is defined as a person managing paroxysmal AF themselves by taking antiarrhythmic drugs only when an episode of AF starts.

Pill in the pocket*
• Consider a 'no drug treatment' or 'pill-in-the-pocket' strategy for people who have infrequent paroxysms and few symptoms, or where symptoms are induced by known precipitants such as alcohol, caffeine.
• In people with paroxysmal AF, consider a 'pill-in-the-pocket' strategy for those who have:
  ➢ no history of left ventricular dysfunction, or valvular or ischaemic heart disease, AND
  ➢ a history of infrequent symptomatic episodes of paroxysmal AF, AND
  ➢ have a systolic blood pressure greater than 100 mmHg and a resting heart rate above 70 bpm, AND
  ➢ are able to understand how and when to take the medication.

Referral for specialised management
• If treatment fails to control symptoms of AF, refer people promptly for specialised management.

Left atrial ablation and a pace and ablate strategy – see NICE pathway

Acute atrial fibrillation
• In people with life-threatening haemodynamic instability caused by new-onset AF, carry out emergency electrical cardioversion without delaying to achieve anticoagulation.
• In people with AF presenting acutely with non-life-threatening haemodynamic instability:
  ➢ offer rate or rhythm control if onset of arrhythmia is <48 hours,
  ➢ start rate control if onset is >48 hours or is uncertain.
• In people in whom duration of arrhythmia is >48 hours or uncertain and considered for long-term rhythm control, delay cardioversion until they have been maintained on therapeutic anticoagulation for a minimum of 3 weeks. During this period offer rate control as appropriate.
• Consider either pharmacological or electrical cardioversion depending on clinical circumstances and resources in people with new-onset AF who will be treated with a rhythm control strategy.
• If pharmacological cardioversion has been agreed offer:
  ➢ flecainide or amiodarone if there is no evidence of structural or ischaemic heart disease, OR
  ➢ amiodarone if there is evidence of structural heart disease.
• Do NOT offer a calcium-channel blocker or magnesium for pharmacological cardioversion.
• In people receiving no, or subtherapeutic, anticoagulation therapy: offer heparin at initial presentation. Continue until a full assessment has been made and appropriate antithrombotic therapy has been started – see NICE pathway.

Prevention and management of post-op AF – see NICE pathway

Review
• Review the need for anticoagulation at least annually or more frequently if clinically relevant events affecting anticoagulation or bleeding risk occur.
• For people not taking an anticoagulant, review stroke risk when they reach age 65 OR if they develop any of the following at any age:
  ➢ diabetes, HF, peripheral arterial disease, coronary heart disease, stroke, transient ischaemic attack or systemic thromboembolism.
• For people not taking an anticoagulant because of bleeding risk or other factors, review stroke and bleeding risks annually, and ensure that all reviews and decisions are documented.