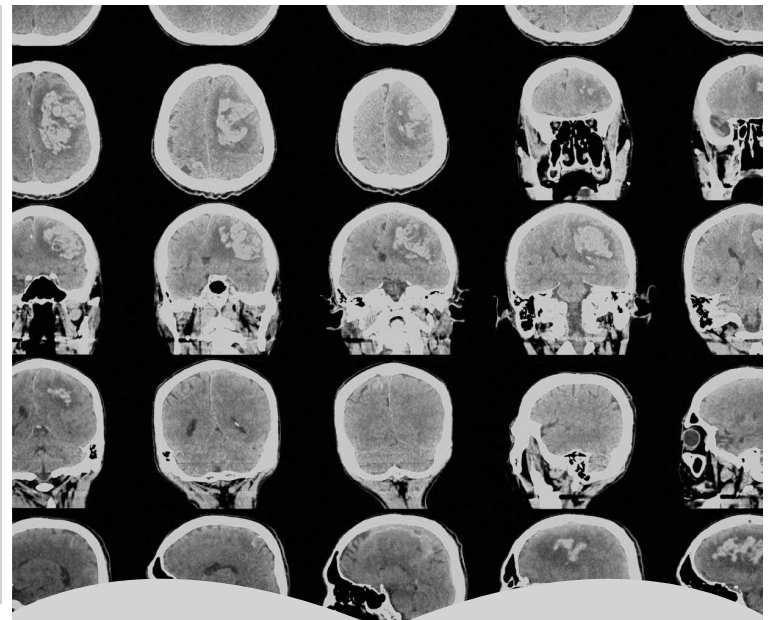
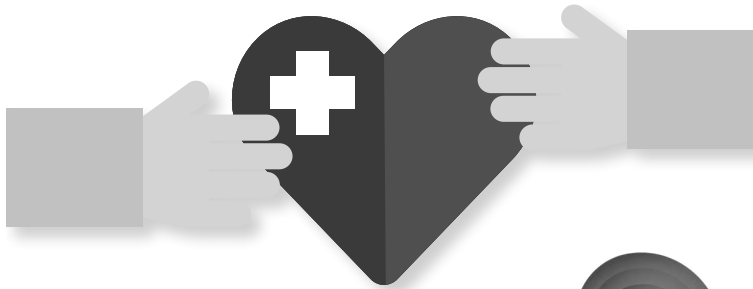


Anticoagulant Treatment in

# Atrial Fibrillation

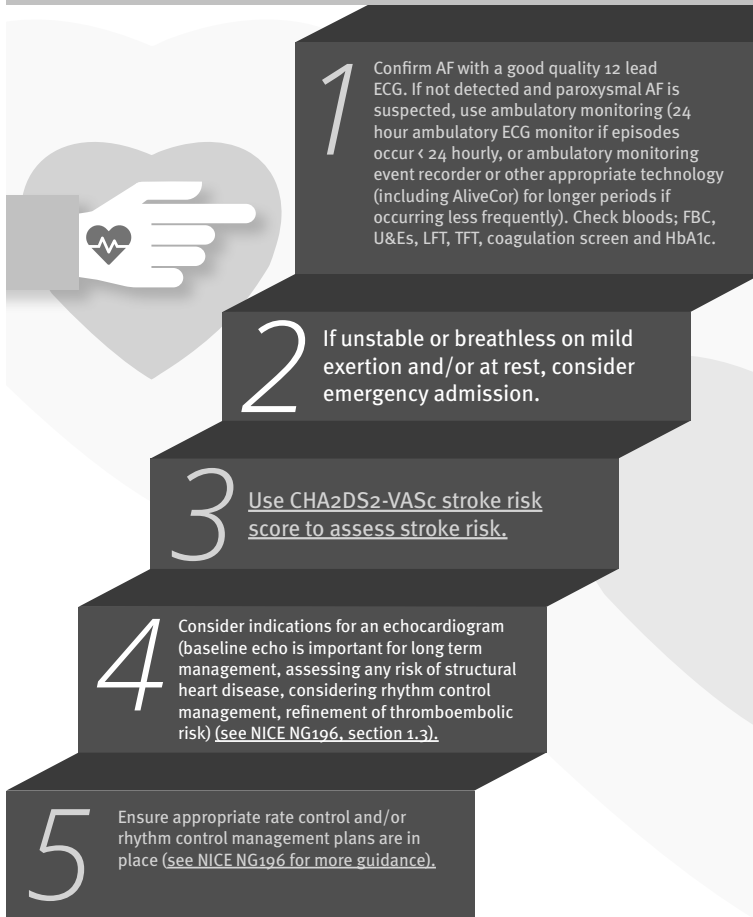
For Prevention of Stroke and Systemic Embolism



*The estimated prevalence of AF in England is 2.5% and increases with age with a prevalence of more than 9% in those aged over 85 years and is predicted to double over the next 25 years as the population ages. It may be asymptomatic.*

*Effects of AF-related stroke are much more serious than non-AF related stroke, with 2 out of every 5 patients dying, another 2 going into a care home and only 1 going home.*


## 1. Atrial Fibrillation Diagnosis and Related Stroke Risk Assessment (in the absence of mitral stenosis and/or mechanical heart valves) and Management



## 2. Atrial Fibrillation Diagnosis and Related Stroke Risk Assessment (in the absence of mitral stenosis and/or mechanical heart valves) and Management



### 3. Atrial Fibrillation Diagnosis and Related Stroke Risk Assessment (in the absence of mitral stenosis and/or mechanical heart valves) and Management




**11** Offer a DOAC (apixaban, dabigatran, edoxaban, rivaroxaban) in preference to warfarin, unless contra-indicated, not tolerated, or unsuitable.

**12** If already treated with warfarin and stable, discuss switching to a DOAC at next routine appointment, unless DOAC contra-indicated, not tolerated, or unsuitable. In patients treated with warfarin, ensure good INR control (review TTR (time in therapeutic range)). Poor control and an indication to reassess anticoagulation is defined by NICE NG196 as 2 INR values higher than 5 or 1 INR value higher than 8 within the past 6 months, 2 INR values less than 1.5 within the past 6 months, and/or TTR less than 65%.

**13** Do not offer anticoagulation for stroke prevention if very low risk of stroke i.e. CHA<sub>2</sub>DS<sub>2</sub>-VASc score of 0 in men, CHA<sub>2</sub>DS<sub>2</sub>-VASc score 1 in women.

**14** Review concordance including quality of anticoagulation and monitoring of renal function (use Cockcroft-Gault equation) MHRA advice on DOACs - [www.gov.uk/drug-safety-update/direct-acting-oral-anticoagulants-doacs-reminder-of-bleeding-risk-including-availability-of-reversal-agents](http://www.gov.uk/drug-safety-update/direct-acting-oral-anticoagulants-doacs-reminder-of-bleeding-risk-including-availability-of-reversal-agents)


### 4. Atrial Fibrillation Diagnosis and Related Stroke Risk Assessment (in the absence of mitral stenosis and/or mechanical heart valves) and Management

**A Step By Step Guide** 

**15** Review patients at least annually or earlier if stroke and/or bleeding risk changes.

**16** Review patients who have not been anticoagulated because of a high bleeding risk; this should be reviewed regularly and the decision reconsidered.

**17** In patients with a diagnosis of AF, anticoagulation should not be routinely stopped if AF is no longer detected, and any decision about anticoagulation should be based on an up to date assessment of stroke (CHA<sub>2</sub>DS<sub>2</sub>-VASc) and bleeding (ORBIT) risks, and individual patient preference.

**18** For guidance about referral for specialized management, see NICE NG196 [www.nice.org.uk/guidance/NG196](http://www.nice.org.uk/guidance/NG196) 

### 5. Assessing Atrial Fibrillation Related Stroke Risk with CHA<sub>2</sub>DS<sub>2</sub>-VASc Stroke

CHA <sub>2</sub> DS <sub>2</sub> -VASc	Score
Congestive heart failure	1
Hypertension	1
Age ≥ 75 years	2
Diabetes mellitus	1
Stroke/TIA/TE	2
Vascular disease (prior MI, PAD, aortic plaque)	1
Aged 65 to 74 years	1
Female	1
<b>MAXIMUM SCORE</b>	<b>9</b>

### 6. Outcome of Scores CHA<sub>2</sub>DS<sub>2</sub>-VASc Risk Score Interpretation

CHA <sub>2</sub> DS <sub>2</sub> -VASc	Risk of ischaemic stroke at 1 year	Risk of stroke / TIA / systemic embolism at 1 year
0	0.2%	0.3%
1	0.6%	0.9%
2	2.2%	2.9%
3	3.2%	4.6%
4	4.8%	6.7%
5	7.2%	10.0%
6	9.7%	13.6%
7	11.2%	15.7%
8	10.8%	15.2%
9	12.2%	17.4%



[www.mdcalc.com/cha2ds2-vasc-score-atrial-fibrillation-stroke-risk#evidence](http://www.mdcalc.com/cha2ds2-vasc-score-atrial-fibrillation-stroke-risk#evidence)



Created by Dr Gregory Lip [www.mdcalc.com/cha2ds2-vasc-score-atrial-fibrillation-stroke-risk#evidence](http://www.mdcalc.com/cha2ds2-vasc-score-atrial-fibrillation-stroke-risk#evidence) and linked in the NICE NG196 in Tools and Resources Algorithm for AF diagnosis and management [www.nice.org.uk/guidance/ng196/resources/algorithms-for-atrial-fibrillation-diagnosis-and-management-pdf-9082104877](http://www.nice.org.uk/guidance/ng196/resources/algorithms-for-atrial-fibrillation-diagnosis-and-management-pdf-9082104877)

From Friberg et al. EHJ 2012;33:1500-10 - Note the paradoxical decrease in risk between 7 and 8 points; this reflects the findings published in the study, but in general, assume increasing risk with higher scores.

## 7. Assessing Bleeding Risk using the ORBIT Bleeding Risk Score

ORBIT bleeding risk factors

Score

haemoglobin <13 mg/dL for males and <12 mg/dL for females, or haemocrit <40% for males and <36% for females

**NO 0 YES 2**

Age > 74 years

**NO 0 YES 1**

**Bleeding History**  
Any history of GI bleeding, intracranial bleeding, or haemorrhagic stroke.

**NO 0 YES 2**

GFR < 60 mL/min/1.73 m<sup>2</sup>

**NO 0 YES 1**

Treatment with antiplatelet agents

**NO 0 YES 1**

(O'Brien et al EHJ 2015;36:3258-3264)



## 8. ORBIT Bleeding Risk Score Interpretation

ORBIT Score

Risk group

Bleeds per 100 patient years

0-2

Low

2.4

3

Medium

4.7

4-7

High

8.1

From O'Brien et al 2015 and linked in the NICE NG196 in Tools and Resources Algorithm for AF diagnosis and management [www.nice.org.uk/guidance/ng196/resources/algorithms-for-atrial-fibrillation-diagnosis-and-management-pdf-9082104877](http://www.nice.org.uk/guidance/ng196/resources/algorithms-for-atrial-fibrillation-diagnosis-and-management-pdf-9082104877)



## 9. General Information Atrial Fibrillation Related Stroke Prevention

When assessing atrial fibrillation stroke risk treat all types of AF whether symptomatic or asymptomatic paroxysmal, persistent or permanent atrial fibrillation.

If on aspirin and/ or other antiplatelet agent and an oral anticoagulant in combination after an acute MI or stent, stop the antiplatelet agent when 12 months from most recent cardiac event, unless other recommendations have been made by a cardiologist (check hospital correspondence).

The older the patient, the higher the stroke risk and the greater the benefit from anticoagulation.

Aspirin monotherapy is not recommended solely for stroke prevention in AF.

Use an audit tool such as RAID-R or other primary care search tool to check on the quality of management.

For patients with mitral stenosis and mechanical heart valves use warfarin NOT a DOAC.

Ensure patients have written information and understand their anticoagulation and carry an anticoagulant alert card or warfarin booklet.



## 10. Helping the Patient to Choose an Anticoagulant

Discuss the options for anticoagulation with the person and base the choice on their clinical features and preferences (NICE guideline NG196).

Use of particular drugs and doses may be influenced by a patient's clinical profile and risk factors.

Tools and information to support developing shared decision making skills:

Videos and information about shared decision making developed before publication of the most recent NICE AF guideline NG196, available at: [www.ahsn-nenc.org.uk/wp-content/uploads/2019/11/SDM-TopTips.pdf](http://www.ahsn-nenc.org.uk/wp-content/uploads/2019/11/SDM-TopTips.pdf)

Remain alert to emerging evidence.

Allow a little time to make a decision - but not too long. To get agreement and finalise the decision ensure an appointment is made. Remind the patient that the decision can always be changed!



## 11. Things to Discuss Helping the Patient Choose an Anticoagulant

*How much do I wish to avoid a stroke?*

*How well do they work?*

DO NOT use aspirin.  
Effective anticoagulation reduces the risk of AF related ischaemic stroke by two thirds.

*How often do I need to take tablets?*

Once or twice daily options.

*Do I need regular blood tests?*

All OACs require some monitoring: INR for warfarin, renal function for DOAC.

*... And how often?*

Monitoring of renal function remains necessary at least annually with DOACs, more frequently in renal impairment and/or unstable renal function.

*What would happen if I had bleeding?*

See [www.gov.uk/drug-safety-update/direct-acting-oral-anticoagulants-doacs-reminder-of-bleeding-risk-including-availability-of-reversal-agents](http://www.gov.uk/drug-safety-update/direct-acting-oral-anticoagulants-doacs-reminder-of-bleeding-risk-including-availability-of-reversal-agents)

*Do they interact with my other medicines?*

See [www.gov.uk/drug-safety-update/direct-acting-oral-anticoagulants-doacs-reminder-of-bleeding-risk-including-availability-of-reversal-agents](http://www.gov.uk/drug-safety-update/direct-acting-oral-anticoagulants-doacs-reminder-of-bleeding-risk-including-availability-of-reversal-agents)

## 12. GP Checklist

- Rate - controlled to a ventricular rate at rest of below 90?
- Bleeding risk checked with ORBIT Bleeding Risk Score. If high, consider seeking specialist advice.
- Is there any evidence of heart failure that needs addressing?
- If recent onset consider cardioversion.
- Risk stratified for stroke with CHA<sub>2</sub>DS<sub>2</sub>-VASc.
- Discuss anticoagulant options with patient.
- Early review to start anticoagulant.
- If using a DOAC review renal function and ensure correct dose.
- Issue alert card.
- Arrange follow up and monitoring.

## 13. Resources

### FOR PATIENTS

- [www.wessexahsn.org.uk/projects/145/starting-anticoagulation-with-jack](http://www.wessexahsn.org.uk/projects/145/starting-anticoagulation-with-jack)
- [www.heartrhythmalliance.org/afa/uk/for-patients](http://www.heartrhythmalliance.org/afa/uk/for-patients)
- [www.stroke.org.uk/resources/atrial-fibrillation-af-and-stroke](http://www.stroke.org.uk/resources/atrial-fibrillation-af-and-stroke)
- [www.bhf.org.uk/heart-health/conditions/atrial-fibrillation](http://www.bhf.org.uk/heart-health/conditions/atrial-fibrillation)
- [www.patient.info/heart-health/atrial-fibrillation-leaflet](http://www.patient.info/heart-health/atrial-fibrillation-leaflet)

### FOR PRESCRIBERS

[www.nice.org.uk/guidance/ng196](http://www.nice.org.uk/guidance/ng196)

Patient management should be individualised with reference to the BNF, relevant drug SPCs and other national drug prescribing information.

[www.gov.uk/drug-safety-update/direct-acting-oral-anticoagulants-doacs-reminder-of-bleeding-risk-including-availability-of-reversal-agents](http://www.gov.uk/drug-safety-update/direct-acting-oral-anticoagulants-doacs-reminder-of-bleeding-risk-including-availability-of-reversal-agents)

EHRA Practical Guide (2021) to NOAC use in AF available at:

[www.escardio.org/Guidelines/Recommended-Reading/Heart-Rhythm/Novel-Oral-Anticoagulants-for-Atrial-Fibrillation?utm\\_medium=Email&utm\\_source=EHRA&utm\\_campaign=EHRA+-+Bulletin+-+20+May+2021](http://www.escardio.org/Guidelines/Recommended-Reading/Heart-Rhythm/Novel-Oral-Anticoagulants-for-Atrial-Fibrillation?utm_medium=Email&utm_source=EHRA&utm_campaign=EHRA+-+Bulletin+-+20+May+2021)

[www.stroke.org.uk/professionals/resources-professionals](http://www.stroke.org.uk/professionals/resources-professionals)

[www.ahsn-nenc.org.uk/what-we-do/improving-population-health/cardiovascular-disease-prevention/atrial-fibrillation/atrial-fibrillation/noac-alert-card/](http://www.ahsn-nenc.org.uk/what-we-do/improving-population-health/cardiovascular-disease-prevention/atrial-fibrillation/atrial-fibrillation/noac-alert-card/)

The National AF Toolkit at the time of accessing (May 2021) is yet to be updated following the recent publication of NICE AF NG196, but is available at:

[www.aftoolkit.co.uk/introduction-to-the-af-toolkit/](http://www.aftoolkit.co.uk/introduction-to-the-af-toolkit/)

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Clinical Networks



### Anticoagulant Treatment in Atrial Fibrillation for Thromboprophylaxis

This is intended as a summary of guidance and should be reviewed alongside other guidance including the NICE guideline NG196, published 2021  
[www.nice.org.uk/guidance/NG196](http://www.nice.org.uk/guidance/NG196)

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**Stroke**  
Association

