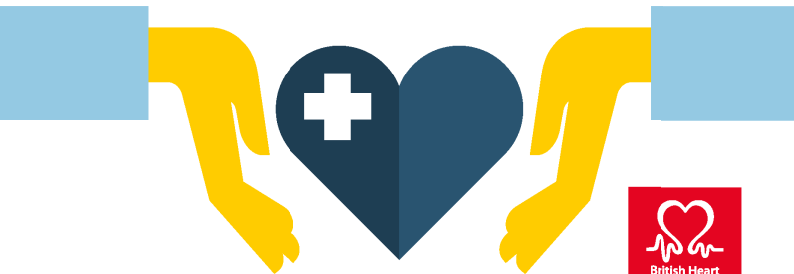


Anticoagulant Treatment in

Atrial Fibrillation

For Thromboprophylaxis

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AF affects about 7 in 100 people aged over 65 and it is usually asymptomatic. Effects of AF-related stroke are much more serious than non-AF related stroke, with 2 out of every 5 dying, another 2 going into a care home and only 1 going home.

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Diagnosing Atrial Fibrillation and Non-Valvular Atrial Fibrillation Related Stroke Risk Assessment and Management

A STEP BY STEP GUIDE



1 Confirm AF with a good quality 12 lead ECG. V1 & 2 are the best leads to spot 'p' waves. Check bloods; FBC, U&Es, LFT, TFT, coagulation screen and HbA1c.

2 If unstable or breathless on mild exertion or rest consider emergency admission

3 Score AF Stroke Risk using CHA₂DS₂-VASc

4 Where it would guide management arrange an echo (see [NICE CE180](#))

5 Score Bleeding Risk using HAS-BLED

A STEP BY STEP GUIDE



6 Use HAS-BLED score to manage bleeding risk factors, rather than to exclude people from anticoagulation

7 Offer anticoagulation depending on score at time of diagnosis

8 Offer choice of warfarin or NOAC

9 Ensure good INR control

10 Review concordance and ensure renal clearance is adequate

11 Review all NOAC patients at least annually

TOP TIP:
Divide creatinine clearance by 10 = monthly frequency of monitoring of U+Es

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Assessing Non-Valvular Atrial Fibrillation Related Stroke Risk

CHA ₂ DS ₂ -VASc	SCORE
Congestive heart failure	1
Hypertension	1
Age \geq 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
MAXIMUM SCORE	9



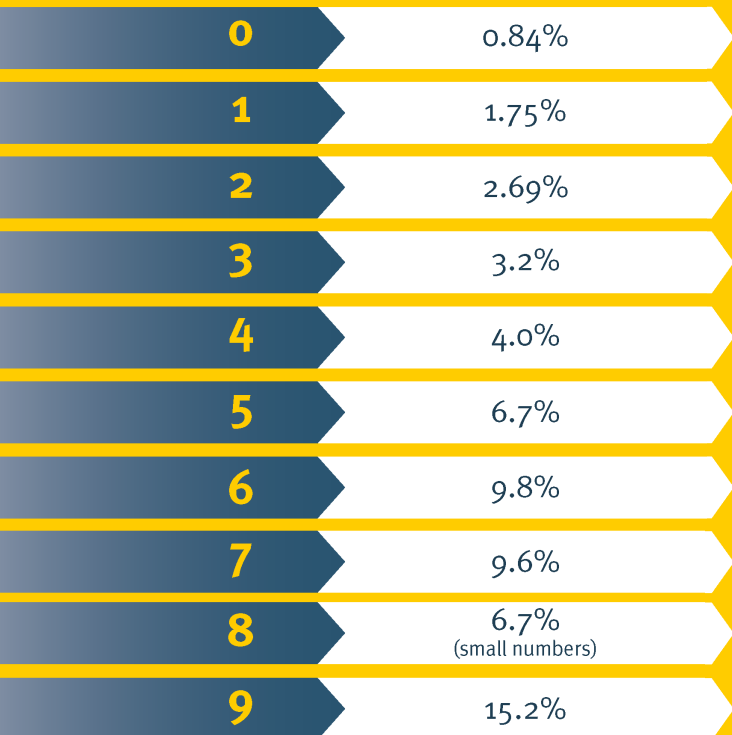
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Outcome of Scores

CHA₂DS₂-VASc Clinical Risk Estimation

Adapted from Lip et al

PERCENTAGES REFER TO ANNUAL STROKE RISK



Assessing Bleeding Risk

HAS-BLED is the Preferred Tool to assess Bleeding Risk
(R Pisters et al: Chest 2010;138:1093-1100)

HAS-BLED RISK FACTORS	SCORE
Hypertension (>160 mm Hg systolic)	1
Abnormal renal (creatinine >200)	1
Abnormal liver (bilirubin $\times 2$, ALT $\times 3$)	2
Stroke	1
Previous bleeding	2
Labile INRs (TTR $<60\%$)	1
Elderly age >65 years	1
Drugs (NSAIDs/aspirin) Alcohol (8 drinks per week)	1+1

Use it to reduce bleeding risk, not to automatically 'trump' CHA₂DS₂-VASc



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HAS-BLED Clinical Risk Estimate

Adapted from Pisters et al

HAS-BLED SCORE	NUMBER OF PATIENTS	NUMBER OF BLEEDING	BLEEDS PER 1000 PATIENTS PER YEAR
0	798	9	11
1	1286	13	10
2	744	14	19
3	187	7	37
4	46	4	87
5	8	1	125
6	2	0	-
7	-	-	-
8	-	-	-





General Information

Atrial Fibrillation Related Stroke Prevention

When assessing atrial fibrillation stroke risk treat all types of AF whether recent, intermittent or permanent the same.

NICE defines poor INR control as $1 \times > 8$ or $2 \times < 1.5$ in the last 6 months: Investigate concordance & evaluate the risk/benefit of an alternative.

TTR (Time in Therapeutic Range) should be at least 65% (in the last 6 months). Investigate compliance and evaluate the risk / benefit of an alternative if less than 65 %.

If on aspirin for an acute MI or stent, stop it when 12 months from most recent cardiac event, unless other recommendations have been made by a cardiologist.

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

Aspirin Monotherapy is no longer recommended for stroke prevention in AF.

Use an audit tool such as GRASP-AF or RAID-R to check on your quality of management.

Advice on switching anticoagulants or stopping before surgery is available on www.sps.nhs.uk/wp-content/uploads/2016/09/swmitrtdc-OAC-comparison-jan16-final-Version-2.1.pdf

Consider an Echocardiogram if there is a concern that the patient may have structural heart disease such as LVSD and/or mitral valve disease.

Valvular Heart Disease : Mitral Valve Stenosis, Mitral Valve (mechanical) Replacement and (recent) Mitral Repair were excluded from all NOAC trials - use warfarin.

Ensure patients are carrying an anticoagulant alert card or warfarin booklet and information pack.

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 cg 180).

In some clinical scenarios efficacy and safety of oral anticoagulants may be similar with no preference for warfarin or NOAC e.g. in controlled hypertension.

Use of particular drugs and doses may be influenced by a patient's clinical profile and risk factors e.g. prior TIA or stroke may favour a NOAC. Outcomes of NOACs compared to warfarin are influenced by TTR. If TTR cannot be improved (consider adherence/comorbidities/lifestyle factors including diet and alcohol) consider other strategies including suitability of a NOAC. Renal impairment influences suitable NOACs and doses.

See tools to aid decision making:

www.anticoagulation-dst.co.uk

<http://www.londonscn.nhs.uk/publication/atrial-fibrillation-toolkit-for-london/> for AF Toolkit.

Remain alert to emerging evidence.

Helping the Patient to Choose an Anticoagulant

There is a NICE Patient Decision Aid
[www.nice.org.uk/guidance/cg180/
resources/pdf-243734797](http://www.nice.org.uk/guidance/cg180/resources/pdf-243734797)
with helpful 'smiley faces' charts

Allow a little time to make a decision -
a few days at most. To get agreement
and finalise the decision ensure an
appointment is made. Remind the patient
that the decision can always be changed!

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Things to Discuss

Helping the Patient to Choose an Anticoagulant

How much do I wish to avoid a stroke?

DO NOT use aspirin.

How well do they work?

Anticoagulation prevents two thirds of ischaemic strokes.

How often do I need to take tablets?

Once or twice daily options.

What happens if I miss a tablet?

Favours warfarin as NOACs have a short half-life and concordance is important.

Do I need regular blood tests?

All OACs require some monitoring: INR for VKA, renal function for NOAC.

... And how often?

Monitoring of renal function remains necessary annually with NOACs.

Do I need to watch my diet and drinking?

Favours NOAC as warfarin more affected by alcohol and dietary factors.

What would happen if I had bleeding?

Half-life of NOACs is short. Prothrombin Complex Concentrates exist to reverse warfarin. A reversal agent is licenced for Dabigatran.

Do they interact with my other medicines?

May favour NOAC or warfarin. Both may interact with other medicines.

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1 For patients with atrial fibrillation who do not require rapid anticoagulation, a slow-loading regimen is available. Prescribe 1 mg daily for one week, then measure INR. As long as INR remains below 1.5 continue to increase by 1 mg every week. Once INR is ≥ 1.5 titrate the dose upwards in small increments until therapeutic range is reached. This can be done through the Warfarin Monitoring Service.

2 Pharmacogenetic testing in partnership with a dosing algorithm to guide initiation and maintenance dosing for new or unstable patients is being evaluated in some areas; use might become more widespread.

3 Self-monitoring is recommended for patients where they prefer and can use this. Use telehealth support if local service provision allows. www.nice.org.uk/guidance/dg14

4 The time in therapeutic range (TTR) should be above 65%, the higher the better, to optimise stroke and systemic embolism prevention and minimise bleeds. Reassess and address factors that might be contributing to poor control. If not amenable to improvement, consider benefits and risks of alternative stroke prevention strategies.

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GP Checklist

- Rate - controlled to a ventricular rate of below 90?
- Bleeding risk checked with HAS-BLED. 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 CHA₂DS₂VASc.
- Bleeding risk checked with HAS-BLED.
- Discuss anticoagulant options with patient.
- Early review to start anticoagulant.
- If using a NOAC is the kidney function good enough?
- Issue alert card.
- Arrange follow up.

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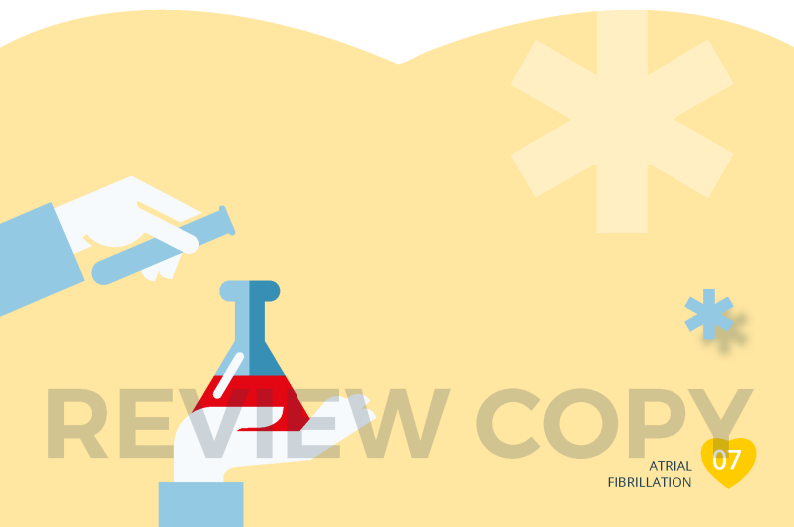
FOR PATIENTS

www.atrialfibrillation.org.uk/patient-information/treatments

<https://www.stroke.org.uk/resources/atrial-fibrillation-af-and-stroke>

www.bhf.org.uk/heart-health/conditions/atrial-fibrillation

www.patient.co.uk



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Resources

TRIALS

Dabigatran (RE-LY)

N Engl J Med 2009; 361:1139-1151 September 17, 2009
DOI: 10.1056/NEJMoa0905561

Rivaroxaban (Rocket-AF)

N Engl J Med 2011; 365:883-891 September 8, 2011
DOI: 10.1056/NEJMoa1009638

Apixaban (ARISTOTLE)

N Engl J Med 2011; 365:981-992 September 15, 2011
DOI: 10.1056/NEJMoa1107039

Edoxaban (Engage-Timi-48)

N Engl J Med 2013; 369:2093-2104 November 28, 2013
DOI: 10.1056/NEJMoa1310907

FOR PRESCRIBERS

www.nice.org.uk (CG 180)

www.afibmatters.org/en_GB/Treatments

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

[www.sps.nhs.uk/wp-content/uploads/2016/09
/swmitrtdc-OAC-comparison-jan16-final-Version
-2.1.pdf](http://www.sps.nhs.uk/wp-content/uploads/2016/09/swmitrtdc-OAC-comparison-jan16-final-Version-2.1.pdf)

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