

# Management of Atrial Fibrillation

## Diagnosis and Investigations

NICE 2014, CG180

### Diagnosis and investigations

#### Look for AF by OPPORTUNISTIC CASE FINDING

- Take the **pulse** in those with:
  - Breathlessness
  - Palpitations
  - Syncope/dizziness
  - Chest discomfort
  - Stroke/TIA.
- Do NOT screen asymptomatic populations (evidence shows no benefit).

**AF may also be detected as an incidental finding on clinical examination.**

#### Irregular pulse: AF suspected: do ECG

**If paroxysmal AF suspected:** do a 24h ECG OR use an event recorder ECG in those who have infrequent episodes (less than daily).

#### ECG confirms AF or flutter

Patient education	Stroke prevention/bleeding risk assessment	Rate/rhythm control	Bloods? Echo? Referral?
<p><b>Ensure patient has up to date information on AF including:</b></p> <p>cause, effects, possible complications, management (rate/rhythm control, stroke prevention) and support networks. See Useful websites box for some useful patient sites.</p>	<p><b>Assess stroke risk using CHA<sub>2</sub>DS<sub>2</sub>Vasc</b> (preferred to CHADS<sub>2</sub>)</p> <p><b>AND</b></p> <p><b>Assess bleeding risk using HAS-BLED.</b></p>	<p><b>Rate control is treatment of choice for majority.</b></p> <p>Rhythm control may be indicated if:</p> <ul style="list-style-type: none"> <li>• AF with reversible cause (e.g. pneumonia)?</li> <li>• Heart failure thought to be caused mainly by AF?</li> <li>• New onset AF? (NICE don't define 'new', but they are trying to identify those with a good story for recent onset, e.g. 'I suddenly got these dreadful palpitations'.)</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Bloods:</b> NICE do not recommend any blood tests. Most people would check FBC, renal and thyroid function as a minimum.</li> <li>• <b>Echo:</b> do NOT routinely do echo. Do echo only if result will change management (see criteria below).</li> <li>• <b>Referral to specialist:</b> routine referral not needed. Refer promptly if treatment fails to control symptoms.</li> </ul>

### Echo

- **Do NOT routinely do an echo if decision to initiate anticoagulation has already been made on clinical grounds (most of our patients).**
- **DO request echo if:**
  - Suspected underlying structural or functional heart disease (e.g. murmur, heart failure).
  - Cardioversion planned (echo can indicate likelihood of success).
  - Better stroke risk stratification for antithrombotic therapy is needed (for example, high risk of stroke but also high risk of bleeding).

Trans-oesophageal echo maybe used in specific situations: these would all be patients being seen by the cardiologists.

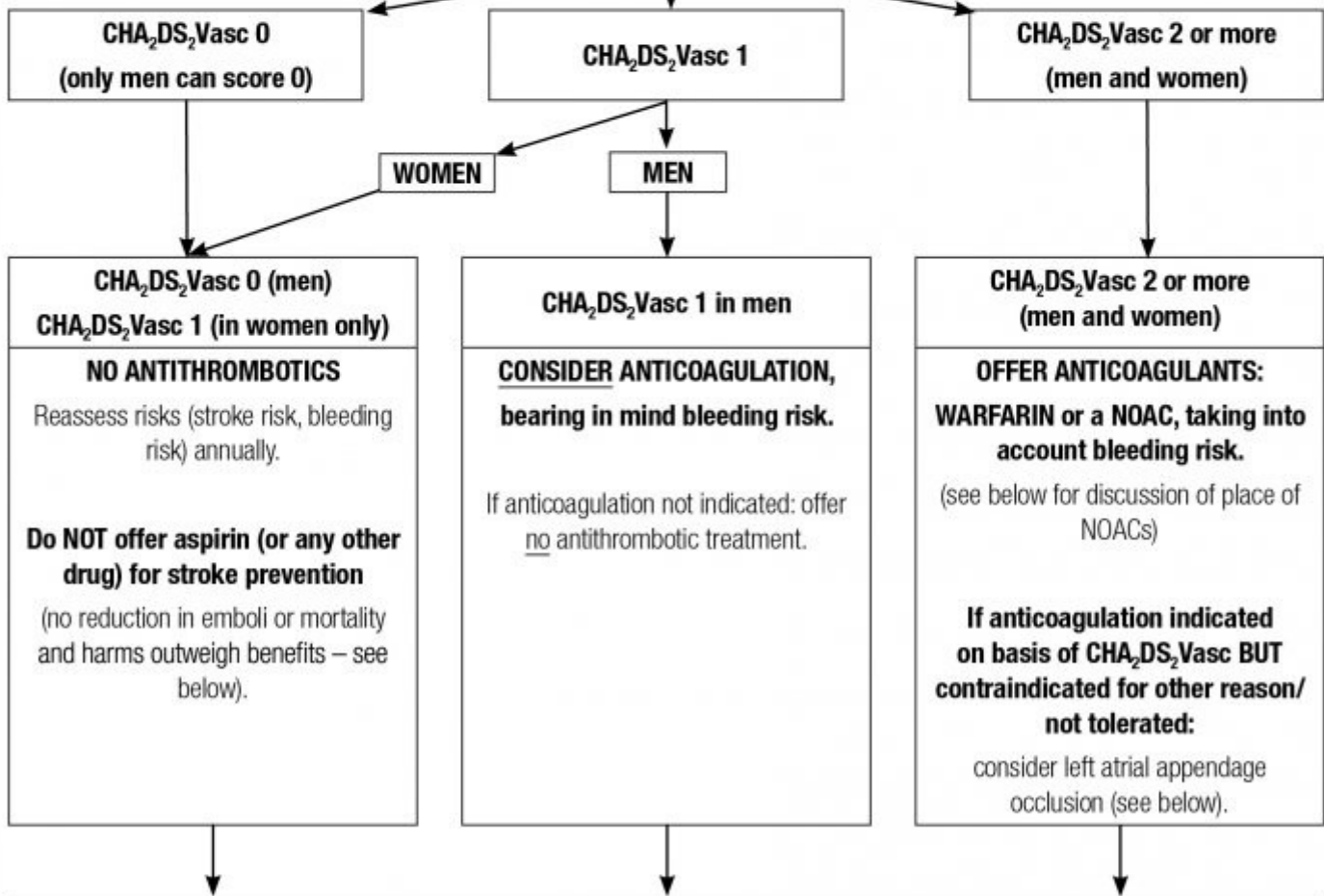
# Stroke and bleeding Risk stratification

**Stroke prevention**  
 This includes those with:  
 Persistent AF  
 Permanent AF  
 Paroxysmal AF (taking into account the FREQUENCY of events)  
 Atrial flutter  
 Those in sinus rhythm after cardioversion but at high risk of going back into AF (cardiologist's decision).

**Assess stroke risk, assess bleeding risk**

<p><b>Use CHA<sub>2</sub>DS<sub>2</sub>Vasc to assess stroke risk</b>                  CHA<sub>2</sub>DS<sub>2</sub>Vasc is a better discriminator in the 'low risk' populations than CHADS<sub>2</sub>.</p>	<p><b>Use HAS-BLED to assess bleeding risk</b>                  Remember that for most, the benefit of anticoagulation outweighs the risks.                  Do NOT withhold warfarin solely because the person is at risk of having a fall.</p>
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Both CHA<sub>2</sub>DS<sub>2</sub>Vasc and HAS-BLED are given below.



**Annual review for all patients**  
 Reassess stroke risk (re-do CHA<sub>2</sub>DS<sub>2</sub>Vasc) and bleeding risk (use HAS-BLED).  
 If on warfarin assess time in therapeutic range (see below).

The NICE guidance continues a few pages on after a discussion of the above guidance.

ASSESSING CHA2DS2Vas score		
Risk factor	CHA2DS2Vasc: maximum = 9	Interpretation
Congestive cardiac failure	1	<ul style="list-style-type: none"> <li>Score 2 or more (men and women): offer anticoagulants.</li> <li>Score 1 in men only: consider anticoagulants.</li> <li>Score 1 in women only: no antithrombotics.</li> <li>Score 0 (men): no antithrombotics.</li> </ul>
Hypertension	1	
Age	1 if 65–74y 2 if $\geq 75y$	
Diabetes	1	
Stroke/TIA (history of)	2	
Sex (female)	1	
Vascular disease (MI, PAD, aortic plaques)	1	

Annual stroke risk by CHA2DS2Vasc score	
CHA2DS2Vasc	Annual stroke risk (%)
0	0%
1	1.3%
2	2.2%
3	3.2%
4	4%
5	6.7%
6-9	9-15%

HAS-BLED score identifies those at high risk of bleeding	
HAS-BLED Criteria: score 3 or more suggests high risk	Points: maximum = 9
Hypertension – uncontrolled (SBP >160)	1
Abnormal renal function (on dialysis/transplant/Cr >200) and/or Abnormal liver function (defined as chronic hepatic disease (e.g. cirrhosis) or abnormal LFTs (e.g. bilirubin >2× upper limit of normal, AST/ALT/ALP >3× upper limit normal)	1 point for any renal abnormalities 1 point for any liver abnormalities
Stroke	1
Bleeding (PMH of bleeding problems/anaemia/bleeding tendency)	1
Labile INRs (unstable INRs or INRs frequently not in therapeutic range)	1 Score 0 if never had warfarin
Elderly (age >65y)	1
Drugs (e.g. on aspirin/NSAIDs) or alcohol abuse (1 point each)	1 or 2

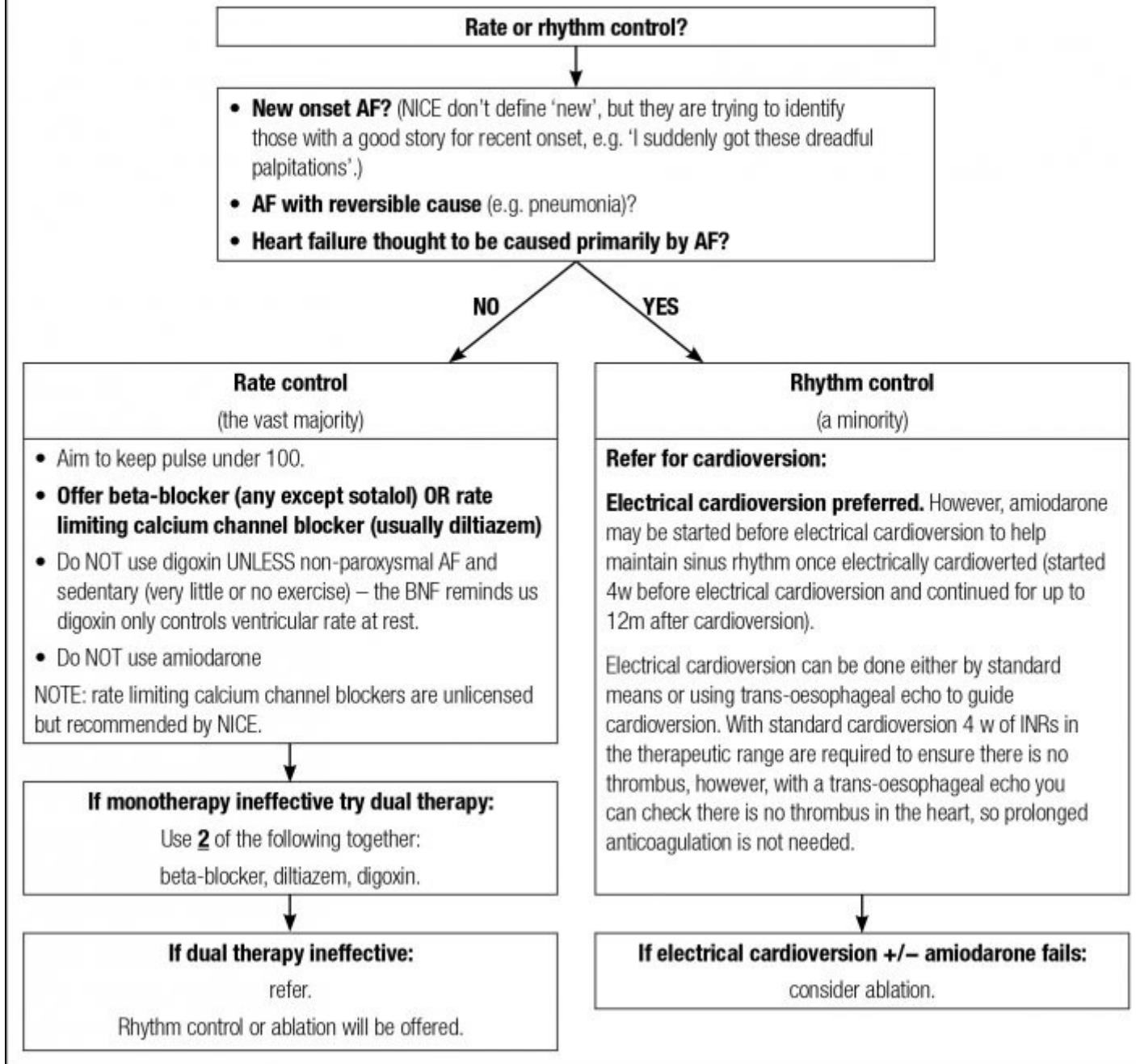
Bleeding risk by HAS-BLED score	
HAS-BLED score	Annual bleeding risk (%)*
0-1	1.1%
2	1.9%
3 or more	4.9%

## Rate or Rhythm?

### Rate or rhythm control in AF? (NICE CG 180, 2014)

**The bottom line is this: rate control for most people!**

*NB this section does NOT apply to paroxysmal AF*



### Rhythm control drugs (these will be initiated by secondary care)

There are 4 main classes of anti-arrhythmics (from BNF 2014):

- Class 1c: flecainide, propafenone. (Class 1a (disopyramide) drugs – rarely used in the UK.)
- Class 2: beta-blockers (but not sotalol, see below).
- Class 3: amiodarone, dronedarone, sotalol. NOTE: sotalol only has class 3 properties above 240mg/day. Below this dose (most are on lower doses) it acts like a standard beta-blocker, but lengthens QT interval and for this reason it is not a primary care drug
- Class 4: rate limiting calcium channel blockers (verapamil, diltiazem), NOT the non-rate limiting calcium channel blockers (the dihydropyridines – amlodipine, nifedipine, etc.).

REMINDER: verapamil should not be used with beta-blockers (risk of hypotension and asystole) (very occasionally used in combination by cardiologists if good myocardial function)

Verapamil and diltiazem depress myocardial function and should not be used in heart failure.

**Consider referral for Left atrial appendage occlusion if anticoag is contraindicated/other treatments have failed**

## Management of paroxysmal AF

