

## ATRIAL FIBRILLATION (AF) PRIMARY CARE DIAGNOSIS AND MANAGEMENT PATHWAY

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| Core Policies and Procedures Group                     |  |

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| 0.3            | 20.11.09 | Final amendments by Joe Martins - Cardiologist     |
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| 1              | 15.02.10 | Final Ratified version.                            |

|   |                                      |
|---|--------------------------------------|
| Link with Standards for Better Health Domains | C6 : Clinical and cost effectiveness |
|---|--------------------------------------|

|   |   |
|---|---|
| Link with Trust Purpose and Values statements | <p>We will work to continuously improve services</p> <p>We will support and empower people to contribute to improving their health and that of their community</p> <p>We will value, support and develop all our staff.</p> <p>We will strive to secure seamless services that best meet the needs and preferences of the community.</p> <p>All staff who are not directly involved in patient care will continue to give priority to supporting clinicians</p> |
|---|---|

## Summary Sheet

This pathway is intended to provide information on the management of people with Atrial Fibrillation (AF). It is intended to identify people who are at high risk of developing AF, to promote active screening and to provide a diagnostic pathway. This policy applies directly to all staff members employed by Dudley NHS and Dudley Community Services, who are involved in the management of people with AF and is recommended as good practice guidance for each of the independent contractor professions. National and local guidance, policies, reports and/or papers which this particular document should be read in conjunction with:

### Local Guidance:

- Best practice Guidelines for Lifestyle Assessment
- Cardiovascular Risk pathway
- Hyperlipidaemia Guidelines
- Dudley Guidelines for the Pharmacological Management of Hypertension

### National Guidance: NICE Guidelines for:

- Management of Atrial Fibrillation
- Secondary Prevention of Myocardial Infarction
- Management of Patients with Heart Failure
- Management of Hypertension
- Lipid Modification
- Management of Obesity

### National Service Frameworks for:

- Coronary Heart Disease

This document will be subject to formal review in December 2011 led by the Vascular Programmes Local Implementation Team.

PATHWAY FOR THE IDENTIFICATION AND MANAGEMENT OF

# ATRIAL FIBRILLATION

IN THE PRIMARY CARE SETTING

Implementation date: December 2009  
Review date: December 2011

[Pathway overview](#)

This AF pathway has been produced by the AF pathway group, a sub-group of the Dudley Vascular Local Implementation Team (LIT). It is intended to be used by practice and community teams, GPs, practice nurses, Health Care assistants and administrative/I.T. staff to:

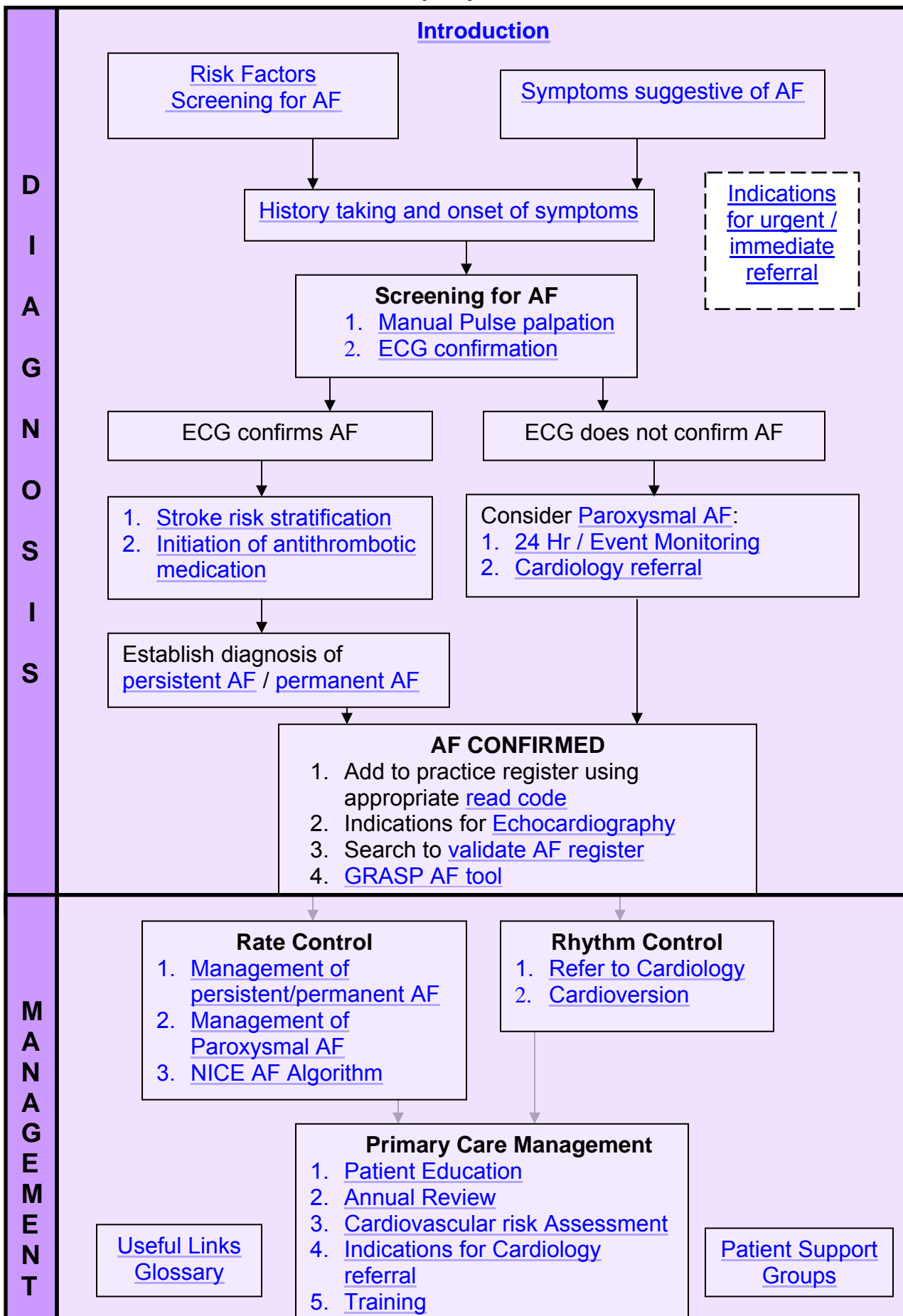
- Build and validate accurate AF registers in line with the Quality and Outcomes Framework of the GMS contract and nationally expected prevalence rates.
- Promote an awareness of AF and the need for reduction of risk, early identification and diagnosis.
- Inform the management of people with AF in line with best practice as demonstrated in local and national guidelines
- Support the appropriate referral to acute services and/or promotion of joint working with acute and community services to provide optimum outcomes in terms of management and patient choice.

Consultation has included:

- Vascular LIT
- Consultant Cardiologists at Dudley Foundation Trust
- Stroke and TIA Implementation Group (STIG)
- Professional Executive Committee
- Dudley Commissioning Forum
- Long-Term Conditions Board
- Dudley Hearts Undergoing Support (HUGS)
- Action Heart Support Group
- Dudley Stroke Association

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# PRIMARY CARE DIAGNOSIS AND MANAGEMENT TOOL KIT FOR ATRIAL FIBRILLATION (AF)



## Introduction

Atrial fibrillation (AF) is an atrial tachyarrhythmia characterised by predominantly uncoordinated atrial activation with consequent deterioration of atrial mechanical function.

It is the commonest sustained cardiac arrhythmia. The patient may experience AF as palpitations, breathlessness, chest pain, dizziness, or in extreme cases loss of consciousness. In many cases, however, it may occur asymptotically.

The prevalence of AF roughly doubles with each advancing decade of age, from 0.5% at age 50–59 years to almost 9% at age 80–89 years

<http://www.nice.org.uk/nicemia/pdf/cg036fullguideline.pdf>

The national quality and outcomes framework (QoF) reported prevalence rate in primary care is 1.3%, which equates to just over 600,000 patients in England with AF. The local prevalence rate is 1.4%; currently we have almost 5,000 patients on primary care registers within Dudley.

AF is a major cause of stroke, accounting for some 14% of all strokes. This is underpinned by the publication by the National Institute for Clinical Excellence (NICE) in 2006 of 'The Management of Atrial Fibrillation. The management of atrial fibrillation costing report which highlighted that amongst patients with recognised AF, 46% of those who would benefit from warfarin are not receiving it.

<http://www.nice.org.uk/nicemia/pdf/CG036costingengland.xls>

Appropriate anti-coagulation of all patients with recognised AF would prevent approximately 4,500 strokes per year and prevent 3,000 deaths.

<http://www.improvement.nhs.uk/LinkClick.aspx?fileticket=%2bLIK1gSgOA%3d&tabid=62>

Strokes attributable to AF are more likely to be fatal and to result in greater neurological impairment than strokes not associated with this arrhythmia.

<http://stroke.ahajournals.org/cgi/content/full/36/2/360>

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## Classifications of AF

Any patient with a new diagnosis of AF is defined as having '**first detected AF**'. AF is termed '**recurrent**' when a patient has two or more episodes. Subsequently they will be defined into the following subtypes according to clinical manifestation:

- **paroxysmal** if it lasts longer than 30 seconds, is self terminating and if each episode of AF lasts less than 7 days (usually less than 48 hours)
- **persistent** if it fails to self terminate or lasts more than 7 days (without attempted cardioversion)
- **permanent** if it is longstanding (usually longer than 1 year), fails to terminate or recurs following attempted cardioversion, or if cardioversion has not been attempted or failed

| Terminology            | Clinical features   | Pattern                 |
|------------------------|---|-------------------------|
| First detected         | Symptomatic<br>Asymptomatic<br>Onset unknown                          | May or may not re-occur |
| Paroxysmal             | Spontaneous termination<br><7 days<br>most often <48 hours            | Recurrent               |
| Persistent             | Not self-terminating<br>Lasting >7 days or prior cardioversion        | Recurrent               |
| Permanent ('accepted') | Not terminated<br>Terminated but relapsed<br>No cardioversion attempt | Established             |

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## Risk factors

There is an increasing prevalence and incidence rate of AF with increasing age.

AF risk is associated/precipitated by the following coexisting conditions:

- **Cardiac causes of AF**
  - Ischaemic heart disease
  - Rheumatic heart disease
  - Hypertension
  - Sick sinus syndrome
  - Pre-excitation syndromes (e.g. Wolff–Parkinson–White)
  
- **Less common cardiac causes**
  - Cardiomyopathy or heart muscle disease
  - Pericardial disease (including effusion and constrictive pericarditis)
  - Atrial septal defect
  - Atrial myxoma
  
- **Non-cardiac causes of AF**
  - Acute infections, especially pneumonia
  - Thyrotoxicosis
  - Excessive alcohol consumption
  - Chronic lung disease
  - Other intrathoracic pathology (e.g. pleural effusion)
  - Pulmonary embolism
  - Electrolyte depletion

**Lone atrial fibrillation (LAF)** – is a clinical diagnosis of AF in the absence of clinical or echocardiographic findings of other cardiovascular disease (including hypertension) or related pulmonary and endocrine diseases, in patients under 60 years of age.

**Screening for AF within primary care should firstly be done by the checking of a manual pulse for rate (tachycardia >100 bpm, bradycardia < 50 bpm) and rhythm (any irregular rhythm should be recorded)**

The read code to record:

|      |                                 |
|------|---------------------------------|
| 244Z | O/E pulse rhythm regular        |
| 2433 | O/E pulse regularly irregular   |
| 243  | O/E Irregular pulse             |
| 2432 | O/E pulse irregularly irregular |
| 2422 | O/E Bradycardia                 |
| 2426 | O/E Tachycardia                 |

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## Screening for AF

Screening for AF in primary care usually falls into 3 main categories:

- **Patients who present with symptoms suggestive of AF**

- **Opportunistically**

Opportunistic screening would involve checking people who attend the practice:

- For monitoring of any long-term condition
- Who attend on a particular day or week according to a pre-decided practice strategy
- For an arranged event offering CVD risk assessment

- **By use of a targeted / structured programme**

A targeted or structured programme could include:

- Recording manual pulse at the time of blood pressure measurement
- Checking manual pulse during attendance for influenza vaccine
- Targeting pulse checks for a particular group, e.g. > 60 age group
- Checking manual pulse during attendance for long-term conditions annual review

### Manual Pulse Palpation

Perform manual pulse palpation to assess for an irregular pulse indicating underlying AF in patients who present with breathlessness, palpitations, syncope or dizziness, chest discomfort, or stroke/transient ischaemic attack (TIA).

Manual pulse screening guidance:

[http://www.knowyourpulse.org/assets/docs/pulse\\_check.pdf](http://www.knowyourpulse.org/assets/docs/pulse_check.pdf)

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## History taking and onset of symptoms

Patients with AF present with a variety of symptoms, but they may also be asymptomatic and have vague, non-specific symptoms. Ask about the presence and nature of **symptoms associated with AF**:

- breathlessness
- palpitations:
  1. onset and termination
  2. frequency
  3. duration
  4. pattern
  5. speed
  6. regularity
  7. pauses
- chest pain
- presyncope, syncope
- fatigue
- confusion
- sweating

### Precipitating factors:

- stimulants (tobacco, coffee, tea, alcohol)
- drugs (inhaled bronchodilators, antidepressants, thyroxine and response to anti-arrhythmic drugs)
- exercise
- stress or anxiety
- smoking, alcohol, illicit drugs
- recent illnesses
- hyperthyroidism

### Additional history:

- history of arrhythmia and any current drug treatment
- history of cardiac disease, hypertension, diabetes mellitus
- family history, eg. premature coronary disease, sudden death (especially < age 40 years)

### Physical examination:

- look for signs of hypoxia, sepsis, cardiac failure, thromboembolism, thyroid disease:
- temperature
- manual blood pressure (BP) <http://www.bhsoc.org>
- manual pulse– rhythm, rate, volume
- peripheral pulses, oedema
- jugular venous pressure (JVP)
- heart sounds, murmurs, gallop
- systems examination
- Determine clinical subtype if possible: paroxysmal, persistent, permanent

## Indications for urgent / immediate referral

Most patients in AF present without haemodynamic compromise. There is a small group of patients who are significantly compromised by the onset of AF and these patients require immediate hospitalisation/urgent intervention.

- Signs of decompensated heart failure (breathlessness, orthopnoea, paroxysmal nocturnal dyspnoea (PND), peripheral oedema, pulmonary crepitations/effusion, raised JVP)
- Chest pain
- Heart rate > 150bpm

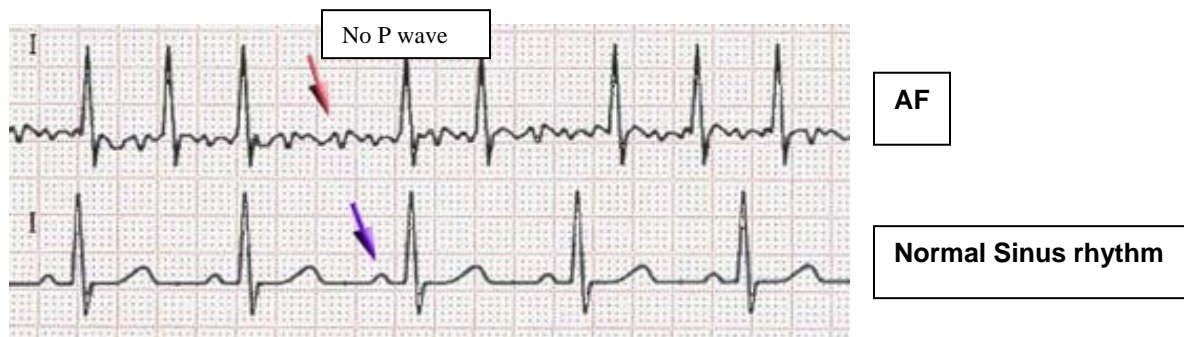
These patients should be discussed with the on-call Cardiology Registrar.

## ECG Confirmation

An electrocardiogram (ECG) should be performed in all patients, whether symptomatic or not, in whom AF is suspected because an irregular pulse has been detected.

**ECG Findings** - Lack of consistent P waves before each QRS complex - replaced by rapid fibrillatory waves that vary in size, shape and timing. The ventricular rate is irregular and may be fast or slow.

**Patients should be given a hard copy of their ECG.**



Where AF is still suspected and has not been detected by standard 12 lead ECG recording, consider a diagnosis of paroxysmal AF.

Either by:

- use a **24-hour ambulatory ECG** monitor (if available) where episodes are less than 24 hours apart
- use an **event recorder ECG** (if available) where symptomatic episodes are more than 24 hours apart.
- referral for [cardiology assessment](#)

<http://www.nice.org.uk/nicemedia/pdf/CG036quickrefguide.pdf>

**If paroxysmal AF is subsequently confirmed it suggested that a referral is made for cardiology specialist assessment**

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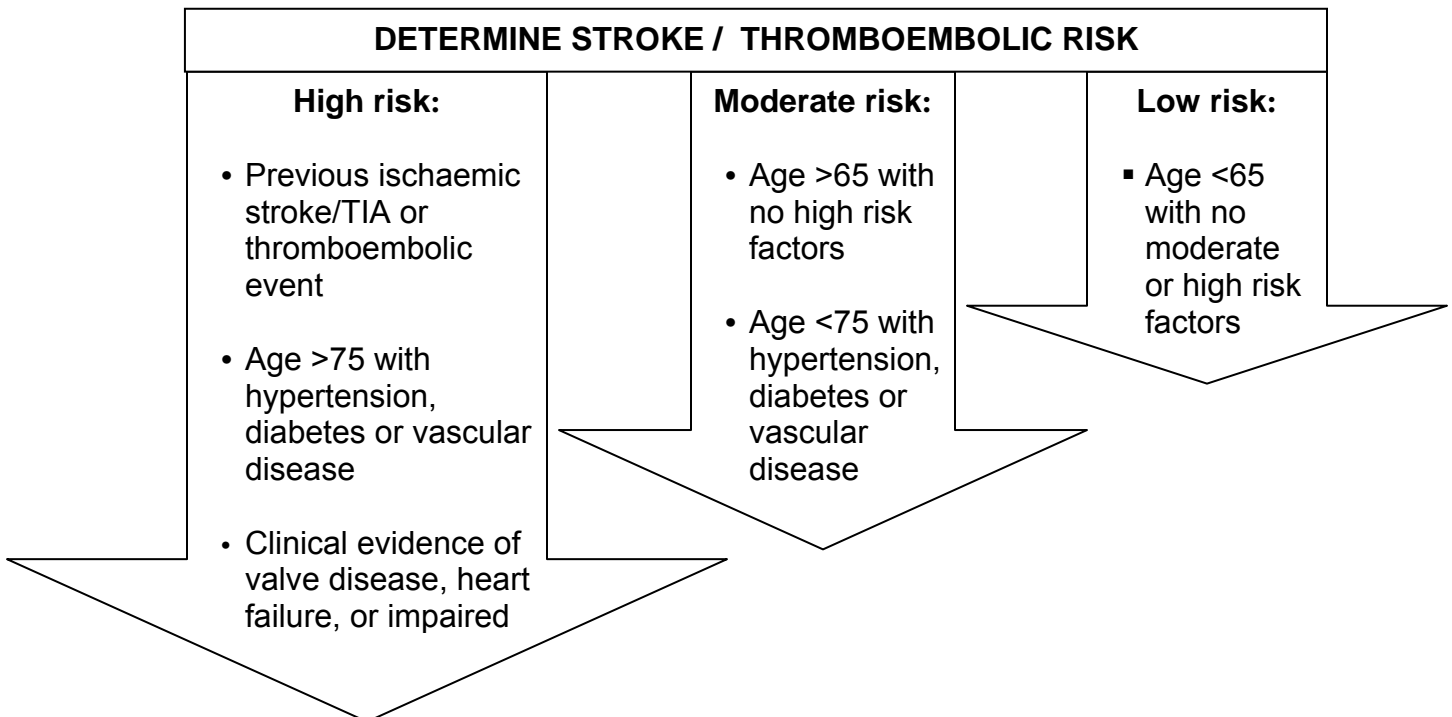
## Stroke risk stratification

- The risk of stroke appears to be highest in the first few months after AF diagnosis
- Strokes associated with AF have higher mortality and greater residual disability than non-AF strokes
- The AF-attributable risk of stroke increase steeply with age from 1.5% for ages 50-59 to 23% in ages 80-89

Assessing the thromboembolic risk is crucial to management.

This should be reassessed annually as risk factor profiles change with advancing age

[NICE AF guidelines:](#)



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**CHADS 2 SCORE:** <http://www.mdcalc.com/chads2-score-for-atrial-fibrillation-stroke-risk>

CHADS2 is a clinical prediction tool for estimating the risk of stroke in patients with non-rheumatic atrial fibrillation. It takes into account:

|                      | <b>Condition</b>  | <b>Points</b> |
|----------------------|---|---------------|
| <b>C</b>             | Congestive heart failure  | 1             |
| <b>H</b>             | Hypertension more than 160 mmHg (or treated hypertension)                   | 1             |
| <b>A</b>             | Age >75 years   | 1             |
| <b>D</b>             | Diabetes Mellitus   | 1             |
| <b>S<sub>2</sub></b> | Prior Stroke or TIA   | 2             |
|                      | <b>A score of &gt;1 is considered high risk indicating Warfarin therapy</b> |               |

### **Initiation of antithrombotic medication**

The choice of anti-thrombotic agent depends on the patient's age, co morbidities, and cardiac status.

Appropriate anti-coagulation of all patients with recognised AF would prevent approximately 4,500 strokes per year and prevent 3,000 deaths.

### **Warfarin / Asprin**

It is important to fully discuss the options for thromboembolic prophylaxis with the patient. Ensure that they fully understand the risks and advantages of their choice of treatment. It is useful to consider the following:

In a meta analysis of 29 Trials, involving 28,044 patients with a mean age of 71 years (Hart et al 2007):

**Warfarin reduced stroke by 64%**

**Aspirin reduces stroke by 22%**

(Risk of extracranial haemorrhage 0.3%)

The results of the **BAFTA** (Birmingham AF treatment of the aged) trial, target INR 2.5 (2-3) 68% of time, mean age 82 yrs showed annually the percentage of patients suffering from major stroke or embolic event was:

**1.8% for Warfarin**

**3.8% for Aspirin**

**In this study, the rates of bleeding were equivalent between the 2 groups** (Annual risk of extra cranial haemorrhage, 1.4% for Warfarin, 1.6% for Aspirin)

**Age is therefore not a contraindication to Warfarin therapy.**

**Aim for an international normalised ratio (INR) target of 2.5 (range between 2.0-3.0) with the oral anticoagulant warfarin**

<http://www.nice.org.uk/nicemedia/pdf/cg036fullguideline.pdf>

**Adverse effects:**

- haemorrhage is the main adverse effect
- hypersensitivity reaction
- alopecia
- liver dysfunction

**Bleeding risk and contra-indications to anticoagulation:**

Few patients have absolute contraindications for anticoagulation, but the bleeding risk should be assessed individually.

Risk factors for increased bleeding include age >75years (but also the highest stroke risk), patients taking antiplatelet drugs/ NSAIDS, a history of previous bleeding or poor INR control, uncontrolled hypertension or patients taking polypharmacy e.g. if taking Selective serotonin reuptake inhibitors (SSRI) or steroids then the bleeding risk is increased.

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The following are considered contra-indications to anticoagulation:

- pregnancy– seek specialist advice
- Active bleeding or unexplained anaemia
- previous intracranial haemorrhage
- severe renal impairment (eGFR < 10mls/min/1.73m<sup>2</sup>)
- severe, uncontrolled hypertension
- frequent falls
- dementia where there supervised medication is unavailable

## Adding to practice register

All patients with a diagnosis of AF should be added to the practice AF register. This is a requirement under the Quality and Outcomes Framework (QoF) clinical indicators of the GMS contract.

### The read codes which build the register are:

**G573%**      Atrial Fibrillation and flutter (excluding G5731 – Atrial flutter)  
**3272**        ECG: Atrial Fibrillation

### Quality and Outcomes Framework AF Clinical Indicators

| Indicator  | Points    | Payment Stages  |
|--|-----------|-----------------|
| <b>AF1:</b> The practice can produce a register of patients with Atrial Fibrillation   | <b>5</b>  |                 |
| <b>AF4:</b> The percentage of patients with Atrial Fibrillation diagnosed after 1st April 2008 with ECG or Specialist confirmed diagnosis. | <b>10</b> | <b>40 – 90%</b> |
| <b>AF3:</b> The percentage of patients with Atrial Fibrillation who are currently treated with anticoagulant or antiplatelet therapy       | <b>15</b> | <b>40 – 90%</b> |

### Prevalence

QoF prevalence in Dudley is currently 1.4 %, nationally the QoF reported prevalence is 1.3%. The prevalence in Dudley may be expected to be higher than the national average due to the greater prevalence of cardiovascular disease within the locality.

Where prevalence is lower than expected, i.e. < 1.0% or registers remain un-validated, it is suggested that a search is run on the practice system to identify patients with AF who do not appear on the current register.

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The resulting list of patients will need to be validated with a current AF diagnosis or an initial event, whether it is paroxysmal, persistent or permanent and entered onto the register. An appropriate read code from the contract should be used.

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## Read Codes

|   |   |
|---|---|
| <b>G573.</b> Atrial fibrillation/flutter<br><b>G5730</b> Atrial fibrillation<br><b>G5731</b> Atrial flutter<br><b>G5732</b> Paroxysmal atrial fibrillation<br><b>G5733</b> Non-rheumatic atrial fibrillation<br><b>G573z</b> Atrial fibrillation/flutter NOS<br><b>212R.</b> Atrial fibrillation resolved | <b>Atrial Fibrillation ECG or Referral to specialist</b><br><b>3272.</b> ECG: atrial fibrillation<br><b>8H41.</b> General medical referral<br><b>8H44.</b> Cardiological referral<br><b>8HR1.</b> Refer for ECG recording<br><b>8H4R.</b> Ref to cardiology special interest GP |
|---|---|

## Guidance on risk assessment and stroke prevention for atrial fibrillation (GRASP-AF) Tool

This tool was developed collaboratively and piloted by the West Yorkshire Cardiovascular Network, the Leeds Arrhythmia team and PRIMIS+, as part of the AF in primary care national priority projects, made available nationally through NHS Improvement.

The tool should be used as part of a systematic approach to the identification, diagnosis and optimal management of patients with AF to reduce their risk of stroke. In summary the GRASP-AF tool:

- Provides a set of MIQUEST queries to identify, for the GP practice, patients with a diagnosis of AF who are not on warfarin
- It will calculate their stroke risk using the CHADS2 scoring system
- It will highlight patients with a CHADS2 score of 2 or more not receiving warfarin who would benefit from review to assess the issue of anti-coagulation
- The tool does not assess contraindications to warfarin, the decision whether or not to start warfarin remains a clinical one.

<http://www.improvement.nhs.uk/graspaf/>

## Echocardiography

An echocardiogram is not indicated in all cases of AF – consider transthoracic echocardiography (TTE) if:

- the patient is young (<65) and baseline information of cardiac structure and any pathology is required
- if there is suspicion of the presence of functional heart disease following examination, eg. detected murmur, signs of cardiac failure, that could influence management decisions
- if electrical or chemical cardioversion is being considered – refer to cardiology
- if anticoagulation is being considered and information on heart structure and function is required for risk stratification (most patients can be appropriately risk-stratified on clinical grounds alone)

Prior to referring for TTE consider initially addressing rate control (for patients with rapid ventricular response) to enable accurate assessment of LV function.

If an abnormal echocardiogram result is obtained consider referral to the community heart failure team – See [‘Does my patient have heart failure?’](#)

## Indications for cardiology referral

Consider a specialist Cardiology opinion in the following:

- Suspected or confirmed paroxysmal AF
- Patients with heart failure
- Patients with valvular or structural heart disease
- Patients with confirmed ischaemic heart disease
- Poorly controlled symptoms following initiation of therapy
- Patients considered for cardioversion
- Where a strategy or management plan is unclear

## Management of persistent/permanent AF

- In all patients use appropriate antithrombotic therapy
- Decide on a strategy of rate control (accepting permanent AF and controlling the ventricular rate) or rhythm control (attempt to restore sinus rhythm).

No study has found rate control to be inferior to rhythm control or vice-versa for the outcome measures of mortality or quality of life. Explain the advantages and disadvantages of each strategy to the patient before you decide which to use – take into account co morbidities when deciding.

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## Rate Control

A rate control strategy should be the preferred initial option in the following patients with persistent atrial fibrillation (AF)

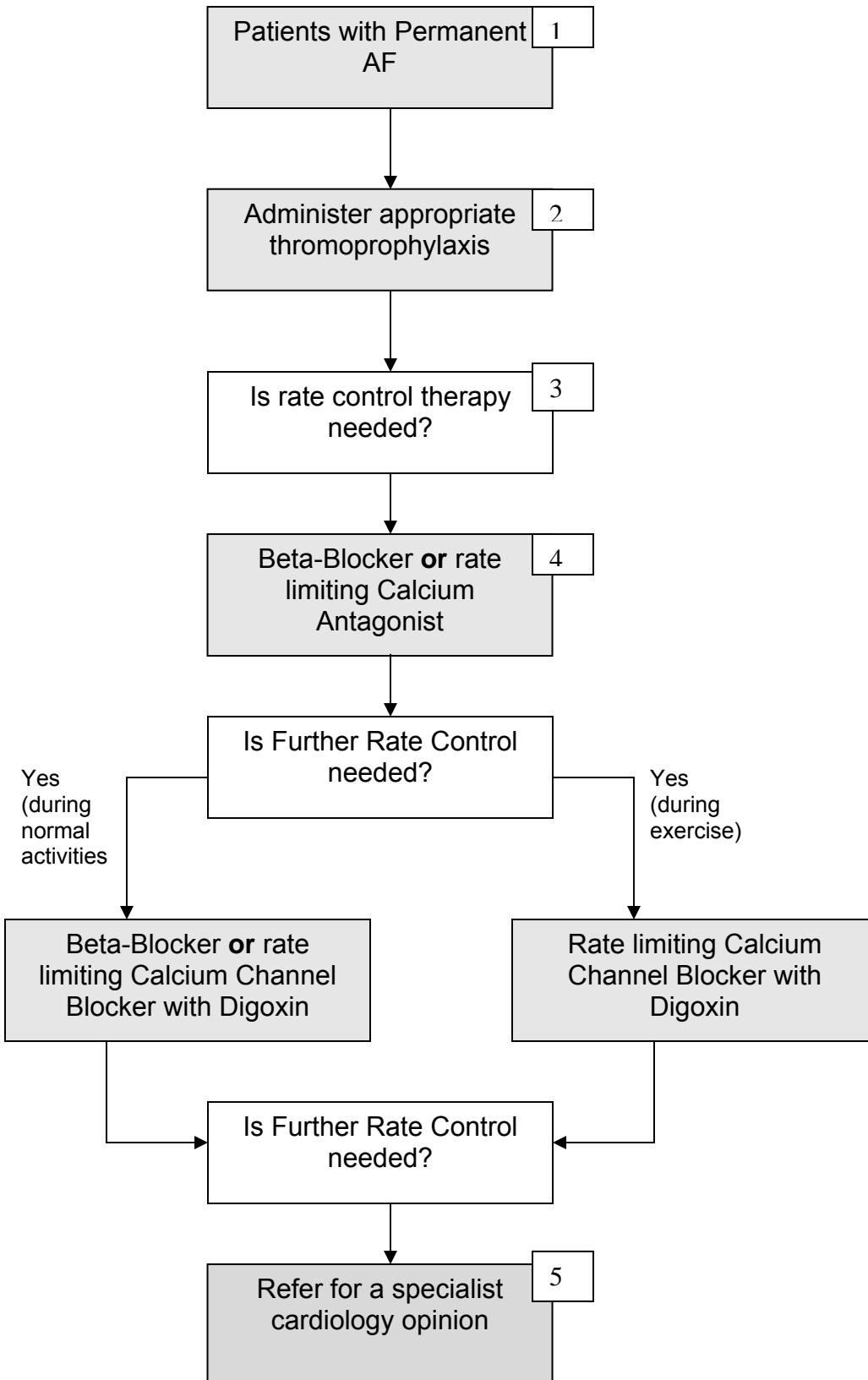
- age over 65 years
- with coronary artery disease
- with contra-indications to anti-arrhythmic drugs
- unsuitable for cardioversion
- without congestive cardiac failure

The target heart rate should be 80-90bpm at rest. Target an exercise heart rate of less than 110 bpm (inactive patients) or 200bpm minus age (active patients).

A beta blocker or rate-limiting Calcium Channel Blocker is the first line choice for ventricular rate control.

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## NICE AF Algorithm (incorporating Dudley formulary)



1. Patients with permanent AF includes those with persistent AF who have been selected for a rate control strategy
  2. Based on stroke risk stratification strategy
  3. Target a resting heart rate 80-90 bpm (110 bpm for those with recent on AF). Target an exercise heart rate of less than 110 bpm (inactive), 200 minus age
- 
4. Dudley Formulary Choices:
- Beta-Blocker
- Atenonol (or Bisoprolol)
- Calcium Channel Blocker
- Verapamil SR 240
  - Diltiazem brand prescribed (Slozem – once daily and Angitil SR – twice a day)
- 
5. Referral for further specialist investigation should be considered especially in those with lone AF or ECG evidence of underlying electrophysiology disorder (e.g. Wolf Parkinson White (WPW)) or where pharmacological therapy has failed.

## Rhythm Control

A rhythm control strategy (**Cardioversion**) should be the preferred initial option in the following patients with persistent atrial fibrillation (AF):

- those who remain very symptomatic despite adequate rate control
- younger patients (age < 65 years)
- those presenting for the first time with lone AF
- those with AF secondary to a treated or corrected precipitant
- consider in select patients with congestive cardiac failure

## Cardioversion

It is recommended that referral for a [specialist cardiology opinion](#) is made for whom cardioversion should be considered

**All patients undergoing electrical or chemical cardioversion should receive anticoagulation**

The risk of thromboembolism can be reduced by the use of therapeutic anticoagulation (INR  $\geq$  2.0) for 3 weeks before and then for at least 4 weeks after cardioversion. This can be commenced in Primary care prior to referral.

**AF is a recurring arrhythmia (50% relapse rate at 6-12 months). Therefore patients successfully cardioverted to sinus rhythm but falling into the moderate to high risk group for thromboembolism will usually remain on long-term Warfarin.**

**Aim for an international normalised ratio (INR) target of 2.5 (range between 2.0-3.0) with the oral anticoagulant warfarin**

<http://www.nice.org.uk/nicemedia/pdf/cg036fullguideline.pdf>

**In patients with persistent AF** who require antiarrhythmic drugs to maintain sinus rhythm and **who have structural heart disease**

- a standard beta-blocker should be the initial treatment option
- where a standard beta-blocker is ineffective, contraindicated or not tolerated amiodarone should be used – **seek cardiology advice first**

**In patients with persistent AF** who require antiarrhythmic drugs to maintain sinus rhythm and **who do not have structural heart disease**

- a standard beta-blocker should be the initial treatment option
- where a standard beta-blocker is ineffective, contraindicated or not tolerated a Class Ic agent (Flecainide) – **seek cardiology advice first**

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## Management of Paroxysmal AF

This usually requires the use of specialist anti-arrhythmic medication and it is recommended that referral for [specialist cardiology opinion](#) is made.

## Primary Care Management

### Patient Education

Patient information leaflets are downloadable from the arrhythmia alliance.

[http://www.heartrhythmcharity.org.uk/html/atrial\\_fibrillation.html](http://www.heartrhythmcharity.org.uk/html/atrial_fibrillation.html)

### Annual Review

Annual review should include achievement of QoF clinical indicators for AF.

**AF1:** The practice can produce a register of patients with AF

**AF4:** The percentage of patients with AF diagnosed after 1<sup>st</sup> April 2008 with ECG or specialist confirmed diagnosis

**AF3:** The percentage of patients with AF who are currently treated with anticoagulation or antiplatelet therapy.

In addition it is suggested that monitoring for undiagnosed / development of other cardiovascular conditions and diabetes should take place. See [CVD risk protocol](#).

The following is suggested:

- Blood pressure monitoring / management
- Stroke risk stratification (on an annual basis)
- Blood tests
- Urea and electrolytes
- Estimated glomerular filtration rate
- Lipid profile
- Thyroid function
- Liver function
- Fasting glucose
- Urinalysis
- CVD risk, primary prevention assessment in lone AF
- Lifestyle risk factors ([Best Practice Guidelines for Lifestyle Assessment](#))
- Smoking status
- Physical activity status
- Nutritional status
- BMI
- Waist measurement
- [Medication review](#)
- Psychological assessment
- Influenza / pneumococcal vaccination
- Patient information

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## Cardiovascular (CVD) risk Assessment

AF is also covered in the [CVD risk pathway](#)

For people who have no cardiovascular diagnosis e.g. Lone AF, it may be appropriate to assess risk of developing CVD. This can be done by using a [JBS2](#) calculator although [QRISK2](#) does factor in a diagnosis of AF into CVD risk.

## Training

Manual pulse checking is included in the [hypertension 3 day course](#) offered by Dudley and Walsall Mental Health Partnership education and training department.

A [CVD skills course](#) is available at degree level from Wolverhampton University.

## Patient Support Groups

**Dudley HUGS** (Hearts Under Going Support) offer all aspects of support, advice, information, education and social support to any patient and carer with a heart condition. The group meets every six weeks, at the Holy Trinity Church Wordsley. For further advice and information please contact:-

Kevin Dodd, Chairman  
Telephone: 07746 822227

### **Action Heart Patient and Family Support Service (PFSS)**

The Co-ordination Team offer a 1-1 'listening session' visiting the Post Coronary Care Unit at Dudley Group of Hospitals. Patients benefit from being able to talk to former patients and carers who themselves had first hand experiences.

In addition the 'Buddy Service' provided by Action Heart volunteers is extremely popular with new patients using the cardiac rehabilitation (CR) facilities. For further advice and information please contact:-

Action Heart  
5 Baird House,  
Dudley Innovation Centre  
The Pensnett Trading Estate  
Kingsinford DY6 7YA  
website at... [www.actionheart.com](http://www.actionheart.com)  
tel: 01384 230222

Patient & Family Support Service  
Action Heart Clinic  
Block C  
Russells Hall Hospital  
Pensnett Road  
Dudley  
Tel: 01384 456111 Ext. 1470

Patient Lead. Harry Bloomer: 01384 635969

## Useful Links

NICE Guidance - The Management of Atrial fibrillation

[www.nice.org.uk/Guidance/CG36](http://www.nice.org.uk/Guidance/CG36)

National Service Framework – Chapter 8 – arrhythmias and Sudden Cardiac Death

[www.dh.gov.uk/en/Healthcare/Coronaryheartdisease/DH\\_4117048](http://www.dh.gov.uk/en/Healthcare/Coronaryheartdisease/DH_4117048)

Arrhythmia Alliance

[www.heartrhythmcharity.org.uk](http://www.heartrhythmcharity.org.uk)

British Heart Foundation

[www.bhf.org.uk](http://www.bhf.org.uk)

British Hypertension Society

<http://www.bhsoc.org>

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## Glossary of terms

|          |   |
|----------|---|
| ACE      | Angiotensin Converting Enzyme   |
| AF       | Atrial Fibrillation   |
| BMI      | Body Mass Index   |
| BP       | Blood pressure  |
| CABG     | Coronary Artery Bypass Graft  |
| CHF      | Congestive heart failure  |
| CKD      | Chronic Kidney Disease  |
| CVD      | Cardiovascular Disease  |
| CXR      | Chest X-Ray   |
| ECG      | Electrocardiogram   |
| eGFR     | Estimated glomerular filtration rate                                      |
| FBC      | Full Blood Count  |
| GMS      | General Medical Services (contract)                                       |
| GRASP-AF | Guidance on risk assessment and stroke prevention for atrial fibrillation |
| HbA1C    | Haemoglobin A1C (glycosylated haemoglobin)                                |
| HTN      | Hypertension  |
| INR      | International normalised ratio  |
| JBS      | Joint British Societies   |
| JVP      | Jugular venous pressure   |
| LAF      | Lone atrial fibrillation  |
| LFT      | Liver Function Test   |
| MI       | Myocardial Infarction   |
| MIQUEST  | Morbidity Information Query and Export Syntax                             |
| NICE     | National Institute for Clinical Excellence                                |
| NSAIDS   | Non steroidal anti-inflammatory   |
| NSTEMI   | Non-ST Elevated Myocardial Infarction                                     |
| NYHA     | New York Heart Association  |
| OD       | Once a day  |
| OE       | On examination  |
| PBP      | Practice Based Pharmacist   |
| PCT      | Primary Care Trust  |
| PND      | Paroxysmal Nocturnal Dyspnoea   |
| PRIMIS   | Primary Care Information Services   |
| PVD      | Peripheral Vascular Disease   |
| QMAS     | Quality Management and Analysis System                                    |
| QOF      | Quality and Outcomes Framework  |
| RHH      | Russells Hall Hospital  |
| SOBOE    | Shortness of Breath on Exertion   |
| SSRI     | Selective serotonin reuptake inhibitors                                   |
| TC       | Total Cholesterol   |
| TG       | Triglycerides   |
| TIA      | Transient Ischaemic Attack  |
| TSH      | Thyroid Stimulating Hormone   |
| TTE      | Transthoracic echocardiography  |

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