Gateshead Clinical Commissioning Group

QE Gateshead
Quality and excellence in health

Guidelines for prescribing in primary care:

Atrial Fibrillation

Implementation date: September 2014

Review date: September 2016

This guideline has been prepared and approved for used within Gateshead in consultation with Gateshead CCG and Secondary Care Trusts.

Approved by:

Committee	Date
Gateshead Medicines Management Committee	14th January 2015

This guideline is not exhaustive and does not override the individual responsibility of health professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or guardian or carer.

Full details of contra-indications and cautions for individual drugs are available in the BNF or in the Summary of Product Characteristics (available in the Electronic Medicines Compendium) www.emc.medicines.org.uk

Atrial fibrillation in Primary Care

Estimates suggest the prevalence of atrial fibrillation is increasing and left untreated atrial fibrillation is a significant risk factor for stroke and other morbidities.

AF – Stroke risk assessment:

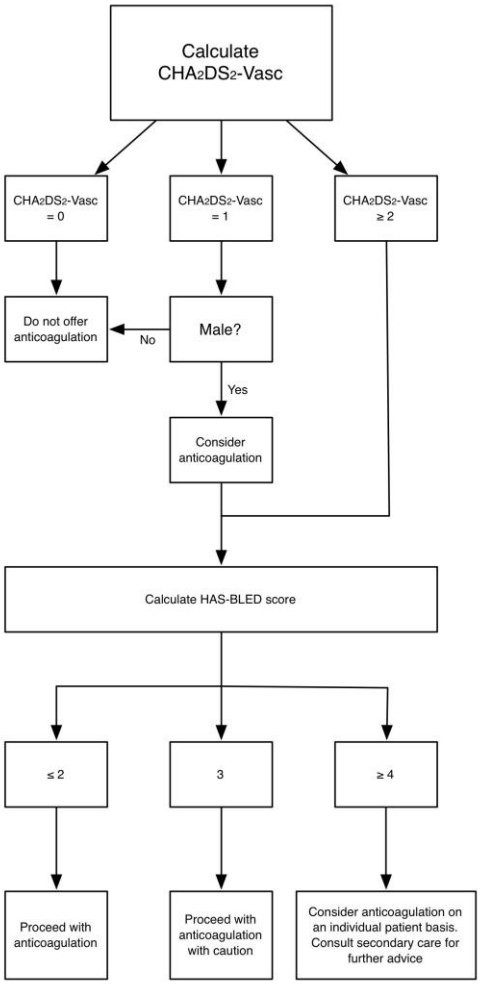
NICE CG180 – Atrial Fibrillation: the management of atrial fibrillation was published in June 2014 and made some significant changes to the diagnosis and treatment of AF.

The overall stroke risk in patients with AF is around 5%. This, however, can vary substantially between patients ranging from a 15-year risk of around 1.3% in younger patients with lone AF up to an annual figure of almost 20% or higher if the individual suffers from valve disease.

NICE now recommends risk is assessed using the CHA2DS2-Vasc and HAS-BLED tools.

CHA2DS2-Vasc	
Risk Factor	**Score**
Congestive heart failure / LVSD	1
Hypertension	1
Age ≥ 75	2
Diabetes Mellitus	1
Stroke / TIA / Thromboembolism	2
Vascular Disease	1
Age 65-74	1
Sex category – Female	1
Maximum Score	**9**

HAS-BLED	
Risk Factor	**Score**
Hypertension	1
Abnormal Renal / Hepatic Function[1] - (1 each)	1 or 2
Stroke	1
Bleeding	1
Labile INRs[2]	1
Elderly (>65yrs)	1
Drugs (e.g. NSAIDs) and/or Alcohol (≥8 drinks per week) - (1 each)	1 or 2
Maximum Score	**9**



[1] Renal Disease - Dialysis, transplant, Cr >2.6 mg/dL or >200 µmol/L
Liver Disease - Cirrhosis, Bilirubin >2x Normal, AST/ALT/AP >3x Normal

[2] Unstable/high INRs, Time in Therapeutic Range < 60%

Stroke risk:

These figures are the approximate number per 1000 patients each year whom have AF and who are predicted to still get a stroke.

Score	No medication	Warfarin	NOAC
CHA_2DS_2-Vasc =0			
CHA_2DS_2-Vasc =1	13	5	4
CHA_2DS_2-Vasc =2	22	8	6
CHA_2DS_2-Vasc =3	32	12	9
CHA_2DS_2-Vasc =4	40	14	10
CHA_2DS_2-Vasc =5	67	24	18
CHA_2DS_2-Vasc =6	98	35	25

HAS-BLED Score:

These figures are the approximate number per 1000 patients each year who are predicted to have major bleeds (GI or intra-cranial) whilst on anticoagulation.

Score	Per 1000 pt per year
0	10
1	20
2	30
3	40
4	88

Antiplatelets

Do not offer antiplatelets as sole treatment for the prevention of stroke in people with atrial fibrillation. Where anticoagulation is not indicated antiplatelets should be stopped.

In cases where an individual has a stent or is post ACS and would normally be treated with dual antiplatelet therapy please discuss on-going treatment of these patients on an individual basis with their consultant cardiologist.

Choice of anticoagulant

Key groups in whom newer oral anticoagulation drugs (NOACs) should especially be considered includes:

- Those who cannot take vitamin K antagonists or have declined to take warfarin

- Those who cannot be stabilised on vitamin K antagonists with poor time in therapeutic range (e.g. less than 65% despite adequate adherence). TTR should be calculated over a maintenance time of at least 6 months, excluding measurements taken within the first 6 weeks of treatment
- Those taking aspirin for stroke prevention where an assessment has been made and warfarin may not be suitable due to reasons that would not specifically exclude them from using anticoagulation

There are currently four available anticoagulants, warfarin, apixaban, dabigatran and rivaroxaban. The newer oral anticoagulants should be targeted to patients who are likely to derive greatest benefit.

Primary care rebate schemes exist for dabigatran and rivaroxaban.

The Newer Oral Anticoagulants should only be used for non-valvular AF within product license and in line with the relevant NICE technology appraisals:

- NICE TA275 - Apixaban for preventing stroke and systemic embolism in people with nonvalvular atrial fibrillation
- NICE TA249 - Dabigatran etexilate for the prevention of stroke and systemic embolism in atrial fibrillation
- NICE TA256 - Rivaroxaban for the prevention of stroke and systemic embolism in people with atrial fibrillation

The decision regarding which treatment is to be used should be made after an informed discussion between the clinician and the patient about the risks and benefits of each of the treatments compared with each other and against no treatment at all.

Use of serum creatinine and eGFR estimated with the MDRD equation may result in a misrepresentation of renal function. This is of particular relevance in elderly patients with low body weight (and conversely younger patients with high muscle mass). Therefore, any patients considered for a newer anticoagulant with reduced renal function should have their creatinine clearance more accurately estimated using the Cockcroft-Gault equation:

$$CrCl = \frac{(140 - age)\ x\ weight\ (kg)\ x\ 1.23\ for\ men\ \textbf{or}\ 1.04\ for\ women}{Serum\ creatinine\ (\mu mol/L)}$$

	Dosages in renal impairment		
Creatinine Clearance	Apixaban	Dabigatran	Rivaroxaban
≥50ml/min	5mg BD (or 2.5mg BD if 2 or more of the following are present - >80y, <60kg or serum cr >133mmol/L)	150mg BD	20mg OD
30-49ml/min		110mg BD	15mg OD
15-29ml/min	2.5mg BD	Avoid	15mg OD (with caution)
<15ml/min	Avoid		

Individuals stable on warfarin should not routinely be considered for changing to a newer oral anticoagulant. Care should be taken to ensure a safe transition between preparations and advice sought from the patient's anticoagulation service where appropriate. Further information is also available on the SPC for each of the newer anticoagulants.

For patients using antiplatelets it is not necessary to have a break between stopping the antiplatelet and starting the NOAC and it is safe to start the new medication the day following the last antiplatelet dose.

NOACs and Compliance aids / swallowing difficulties

Rivaroxaban may be used in compliance aids and is able to be crushed and administered via feeding tube as per the SPC.

NOACs and Food

To ensure appropriate bioavailability rivaroxaban must be given with food. The bioavailability of apixaban and dabigatran are not affected by food.

NOAC Antidotes

Although there are currently no specific antidotes for the NOACs the following points should be taken into consideration when prescribing these drugs:

- The half-life of NOACs in patients with normal renal function is between 9-14 hours.
- It takes 4-6 hours to effectively lower INR using vitamin K in patients taking warfarin. Prothrombin complex concentrate (PCC) will reverse warfarin effect immediately.
- Aspirin has no antidote and a similar /higher bleeding risk to a NOAC and a duration of effect of 5-7 days.
- Work to develop specific antidotes for NOACs is in progress.

Switching between anticoagulants

Warfarin to NOAC:

- Stop warfarin and start NOAC once the INR is <2.0

NOAC to warfarin:

- Start warfarin.
- After 2 days if co-administration of warfarin and NOAC obtain INR.
- Discontinue NOAC when the INR is >2.0

Contraindications

Many patients do not receive anticoagulation due to perceived contraindications. However, absolute contraindications are relatively rare and in studies were only found to make up about 7% and the remainder of patients had relative contraindications which do not specifically exclude them from using anticoagulants and many may be able to be treated.

A risk of falls is not a contraindication to initiating an oral anticoagulant. For example; a patient with an annual stroke risk of 5% would need to fall almost 300 times for the risk of falling to outweigh the stroke reduction benefit of an oral anticoagulant.

Absolute contraindications[3]	Relative contraindications[3]
History of inter-cranial haemorrhage	History of gastro-intestinal haemorrhage
Existing or recent peptic ulcer disease	Unexplained anaemia
Oesophageal varices	Bleeding diasthesis
Previous hypersensitivity / adverse reaction to warfarin	Alcohol abuse
Advanced malignancy / terminal illness	Renal impairment (Creatinine clearance <15ml/min/1.73 is considered an absolute contraindication for all NOACs)
BP >180/110 - (reconsider once BP controlled)	Hepatic impairment (Child-Pugh rating C could be considered absolute contraindication for all NOACs)
Endocarditis	Adverse drug interaction
Pregnancy	Non-compliance
Platelet count below 50 x 10^9/L	Platelet count between 50-150 x 10^9/L

[3] – These lists are non-exhaustive and for up to date information the latest SPC should be checked – available via http://www.medicines.org.uk

Child-Pugh Score

The Child- Pugh classification is a means of assessing the severity of liver cirrhosis.

Score	1	2	3
bilirubin (micromol/l)	<34	34-50	>50
albumin (g/l)	>35	28-35	<28
INR	<1.7	1.7-2.3	>2.3
encephalopathy	none	mild	marked
ascites	none	mild	marked

If there is primary biliary cirrhosis or sclerosing cholangitis then bilirubin is classified as <68=1; 68-170=2; >170=3.

The individual scores are summed and then grouped as:

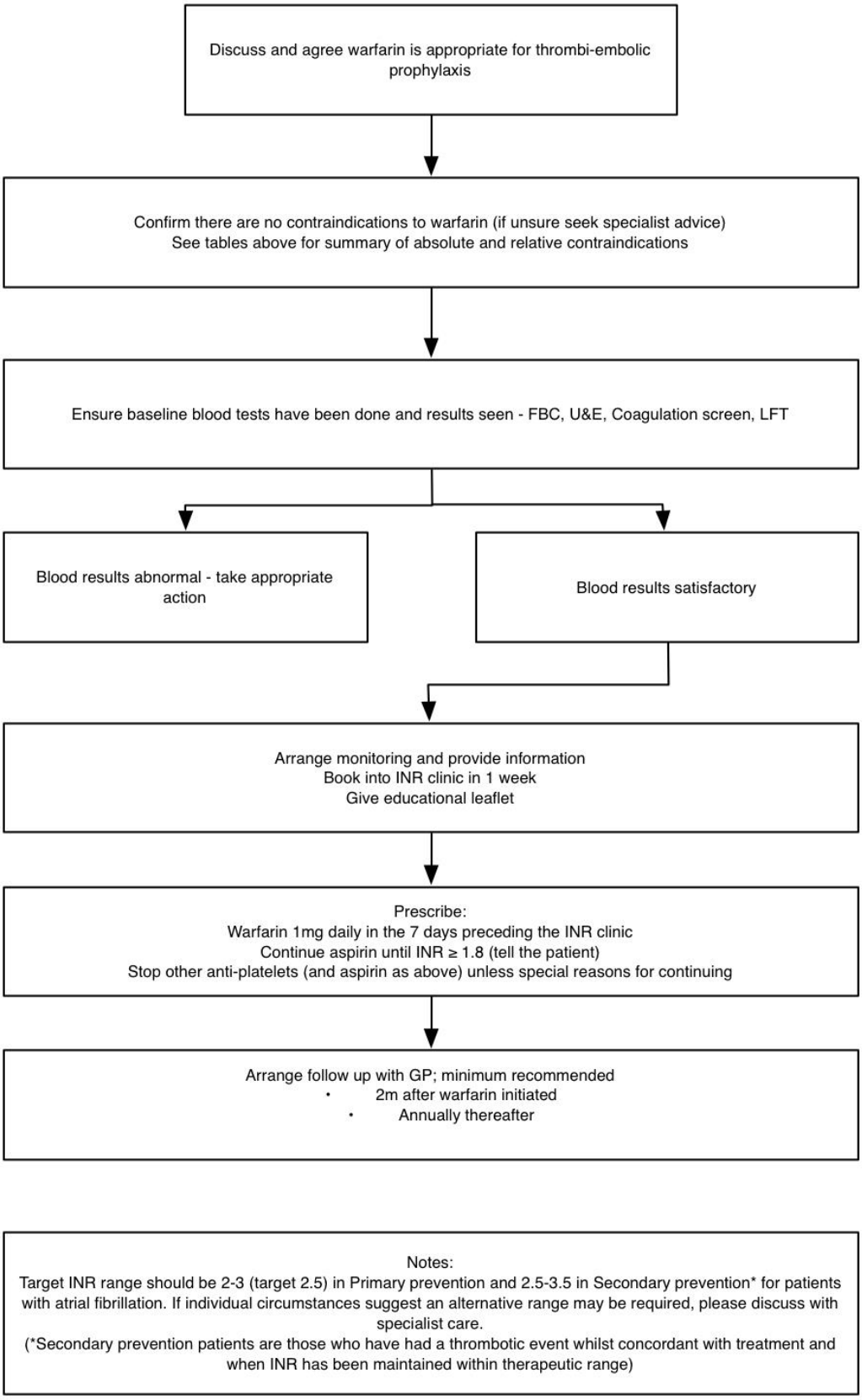
- <7 = A
- 7-9 = B
- >9 = C

Patient information and support

A variety of patient information leaflets are available to help individuals make a decision whether or not to start an anticoagulant. The Atrial Fibrillation Association has several booklets which are available to download – www.atrialfibrillation.org.uk

A patient alert card can be downloaded from www.NOACforAF.eu

Starting warfarin in AF – slow loading regimen:



Notes:
Target INR range should be 2-3 (target 2.5) in Primary prevention and 2.5-3.5 in Secondary prevention* for patients with atrial fibrillation. If individual circumstances suggest an alternative range may be required, please discuss with specialist care.
(*Secondary prevention patients are those who have had a thrombotic event whilst concordant with treatment and when INR has been maintained within therapeutic range)

Initiation of NOACs in AF: