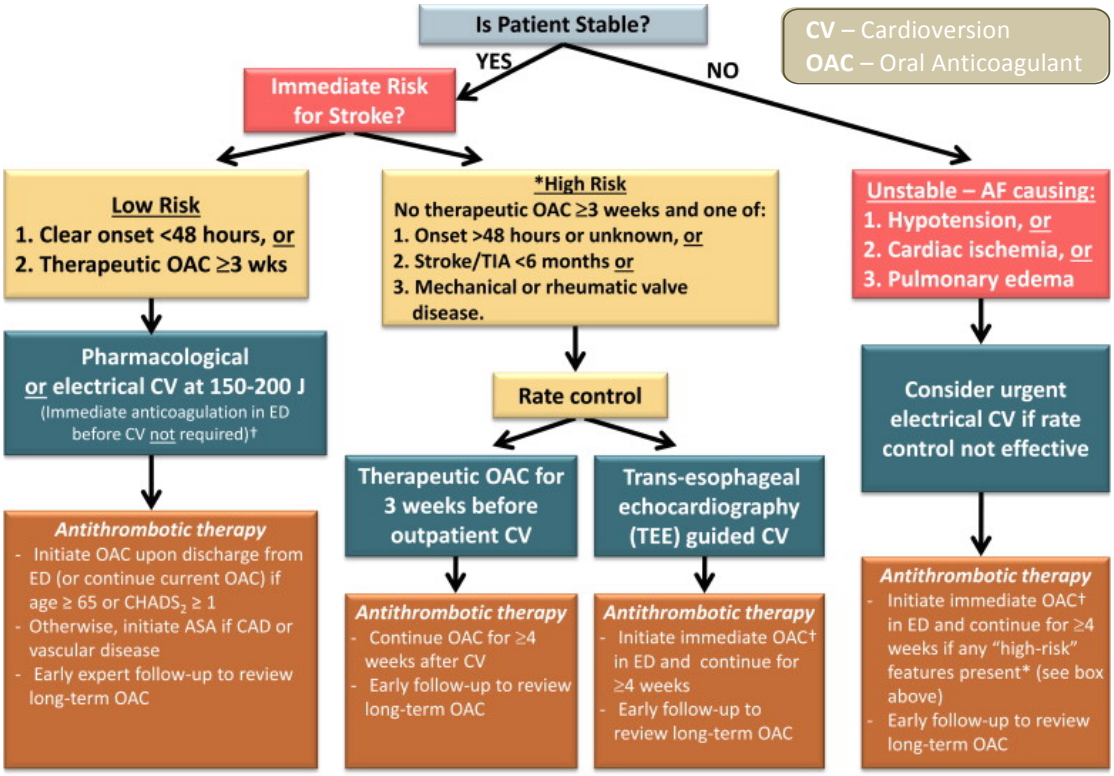
Atrial Fibrillation – Based on 2014 NICE, and CCS Guides

What's the cause of AF?

It's essential any identifiable precipitant is treated, these include:

- **Haemodynamic stress:** Valvular diseae/Hypertension/LVD/Thrombus
- **Atrial ischemia :** Ischaemic Heart Disease
- **Inflammation :** Sepsis/Myocarditis/pericarditis
- **Noncardiovascular respiratory causes:** PE/Pneumonia/Lung Cancer
- **Alcohol and drug use:** Alcohol/Cocaine/Amphetamine
- **Endocrine disorders:** Hyperthyroid/Diabetes/Phaeochromacytoma/Electrolyte prob.
- **Neurologic disorders:** Subarachnoid Haemorrhage/Stroke
- **Genetic factors**
- **Advancing age**



***** WPW with AF: Adenosine, Calcium channel blockers, Digoxin ALL precipitate VF/VT, Electrical Cardioversion is the preferred option*****

Rhythm Control		Electrical[Sync]	Sync; 70J > 120J >150J	1st choice if Unstable
		Flecanide	IV 2mg/kg(max 150mg) 30min, PO 200mg (takes longer)	1st choice – if no Structural or Ischaemic HD, OR Atrial Flutter
		Amiodarone	300mg, 30-60min	
Rate Control	B-Blocker	IV/PO	1st choice	
	Ca Channel blocker	IV/PO	2nd choice (Diltiazem)	
	Digoxin	IV/PO	Should reserved for sedentary or LV dysfunction. Useful adjunct to B/Ca channel blocker.	

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Discharge? If all of following

- No compromise
- HR < 110 for 2hr
- No precipitants requiring admission

ARRYTHMIA CLINIC

- INCLUSION
  - New OR symptomatic AF not seen by cardiologist
  - No Moderate/Severe LV dysfunction
  - No Moderate/Severe Valvular disease
  - No hypertrophic or congenital heart disease
- Send: FBC, U&E, LFT, TFT, Clotting, Glucose HbA1C
- Complete referral form – pages 3 + 4
- Give patient
  - Advice sheet – page 5
  - Rate control – see referral form
  - Consider anticoagulation

GP FU Send Following

- Letter including treatment started
- Patient with ECG's
- Consider need for rate control and anticoagulation

Anti-Coagulation? – Consider Rivaroxiban or Daltaparin

- Is the risk of Stroke > Bleeding
- CHADS-VASC Vs. HAS-BLED

CHADS-VASC

Congestive heart failure	1
Hypertension	1
Age >74	2
Age 65-74	1
Diabetes Mellitus	1
Stroke/TIA	2
Vascular disease	1
Female	1

Yearly risk of Stroke, by score

1 (1.3%)	2(2.2%)	3(3.2%)
4 (4.0%)	5(6.7%)	6(9.8%)
7(9.6%)	8(6.7%)	9(15.2%)

NICE recommend consideration of anticoagulation if score >0

HAS-BLED

Hypertension (>160mmHg)	1
Renal (dialysis, transplant Cr >200)	1
Liver (cirrhosis, LFTs Bili x2 or others x3)	1
Stroke History	1
Prior Major bleed/predisposition	1
High/Unstable INR	1
Age ≥65 years	1
Medication predisposing to bleed	1
Alcohol/Drugs (≥8 drinks/week)	1

Yearly risk of Major Bleed, by score

0-1	1.02%
2	1.88%
3	3.7%
≥4	>8%

Fax to: 01422 224012

CHFT Rapid Access Arrhythmia Clinic: Referral Form

Patient Demographics	**Referrer Details**
Name:	**GP A&E AMU OTHER**
Address:	**Referrer Name:**
Postcode:	Name of referring Consultant / GP:
HOSPITAL NO:	**NHS number:**
D.O.B.	**Referrers contact** telephone number:
PATIENT **DAYTIME** TELEPHONE NUMBERS (all available):	

Atrial Fibrillation	**Atrial Flutter**	**SVT (incl. Atrial tachy)**

(please tick the arrhythmia being referred for)

Referral to be accepted ONLY if all eligibility criteria are met AND no exclusion criteria

ELIGIBILITY CRITERIA:

Evidence of the above Arrhythmia (to be attached and/or given to the patient), on either a 12 lead ECG **or** ambulatory Holter ECG.	**YES**	**NO**
Either newly diagnosed symptomatic arrhythmia and not seen by a cardiologist **or** Previously diagnosed, but still symptomatic **and** not under cardiology follow-up	**YES**	**NO**

EXCLUSION CRITERIA:

1. Patients known to have moderate or severe LV systolic dysfunction	**YES**	**NO**
2. Moderate or severe valve disease	**YES**	**NO**
3. Hypertrophic cardiomyopathy or treated congenital heart disease	**YES**	**NO**
Patients who are adequately rate controlled with minimal/no symptoms and **only** require review for starting oral anticoagulation. Refer for Primary care review.	**YES**	**NO**
Acutely unwell, haemodynamically compromised, confirmed ACS - arrange acute admission.	**YES**	**NO**

(If YES to any of 1-3 – Primary care referral to Cardiology Consultant OP clinic)

Please provide further details of presenting symptoms and reason for referral	

Please review checklist before sending referral

Fax to: 01422 224012

CHFT Rapid Access Arrhythmia Clinic: Checklist before Referral

1. **Have you verified that the patient meets all eligibility and referral criteria?**

2. **Please provide initial 2 weeks supply of medication for arrhythmia control as appropriate (eg. Bisoprolol 2.5 to 5mg od or Diltiazem M/R 90-120mg bd)**

3. **Please inform patients to expect a SMS text and letter from the Arrhythmia Specialist nurse with the appointment date and time.**

4. **Please request /perform the following tests at the time of referral, if not already done within the last 6 months :**
   - Full blood count
   - Urea, Creatinine, Electrolytes
   - Blood Glucose or HbA1C
   - Thyroid function tests
   - Liver function tests
   - Clotting screen (if not already on oral anticoagulants)

5. **Referral form to be sent via any one of :**
   - E referral: set-up in progress.....
   - Email: clare.vickers1@nhs.net
   - Fax: (interim until e-Referral set up) 01422 224012 **FAO Clare Vickers**

CHFT Rapid Access Arrhythmia Clinic: Additional Information

(Required for all referrals from Primary Care)

Past Medical History	Current Medication

Referral to the CHFT Rapid Access Arrhythmia Clinic: Patient Leaflet

Lead Clinician: Dr Karthik Viswanathan, Consultant Cardiologist & Electrophysiologist

Arrhythmia Specialist Nurses: Clare Vickers and Wendy Veevers

Background:

A cardiac arrhythmia refers to an abnormality of the heart rhythm – resulting in a very slow or very fast heart rate (and including irregular heart beat). The latter includes 3 categories: supraventricular tachycardia (SVT), atrial fibrillation and atrial flutter (AF) and ventricular tachycardia (VT). Patients usually experience symptoms such as palpitations, shortness of breath or loss of consciousness, although some may have no symptoms at all.

You have been referred to the Rapid Access Arrhythmia Clinic. What happens now?

1. The referral will be received and reviewed by the Specialist Arrhythmia Nurses and you will receive a SMS text message and letter with the appointment date and time.
2. The Rapid Access Arrhythmia clinic is a multi-professional clinic: you will have an ECG and sometimes also an Echocardiogram (ultrasound of the heart), be seen by the Arrhythmia Specialist Nurse and then see the Consultant. This appointment may take up to 2 hours.

If your referral does not meet the criteria for this clinic, the Arrhythmia nurses will contact you and you will be offered an appointment in another cardiology clinic or an alternative appropriate clinic.

What if your symptoms return before you receive an appointment?

- Ensure you are taking all the medication as directed by your Doctor.

- Many (but not all) episodes of arrhythmia start suddenly, but also stop on their own within a few minutes or sometimes few hours. If your arrhythmia is SVT, you can also try simple tricks called physiological manoeuvres to stop the episode. These are safe and easy to perform and you should have been advised about these by your doctor.

- While you do not need to come to hospital for every episode of arrhythmia, if, however, you feel quite unwell (for example you have bad chest pain, feel very faint or find breathing difficult), you **must** go to the nearest Accident and Emergency Department (A&E). Equally if it does not stop within 30 minutes, you **could consider** going to A&E.

Who can I contact for advice before the appointment?

- The Arrhythmia Alliance website is a UK-based national website that offers useful information for patients on all types of arrhythmias.
  Website: http://www.heartrhythmalliance.org/

- For any other specific questions of a **non-urgent** nature, contact Clare Vickers or Wendy Veevers (Cardiology Arrhythmia Specialist nurses) between Monday to Friday (between 9am to 4:30pm) on 01422 223543. Please leave a message on the answerphone if necessary. We aim to return all calls no later than the end of the next working day.

CHFT Rapid Access Arrhythmia Clinic: Overview

Lead Clinician: Dr Karthik Viswanathan, Consultant Cardiologist & Electrophysiologist

Arrhythmia Specialist nurses: Clare Vickers and Wendy Veevers

Aim of Rapid Access Arrhythmia Clinic:

1. Reduced waiting time for specialist assessment, diagnosis and management of newly diagnosed arrhythmia.
2. Arrhythmia nurse input, allowing for counselling about diagnosis, risk factors, lifestyle change and management including anticoagulation.
3. Patients only visit hospital once; investigations (eg. Echo) completed the same day.
4. Reduce 'unnecessary' hospital admissions as OP review provided by a specialist team within two weeks.
5. Input from consultant cardiologist with arrhythmia interest, facilitating suitable patients to be referred promptly for cardioversion and catheter ablation.

What happens after referral?

1. The referral will be reviewed by the Specialist Arrhythmia Nurse and patients will receive an appointment within 2 weeks.
2. If the patient has been deemed not suitable for this clinic, the patient will be offered either a routine outpatient Cardiology clinic review or an alternative appropriate clinic.
3. The Rapid Access Arrhythmia clinic is a multi-professional clinic: all patients will be seen by an Arrhythmia nurse and a Consultant Cardiologist.

For any queries regarding the referral eligibility or advice on accessing the service, please contact the Cardiology Arrhythmia Specialist nurses.

For asymptomatic patients with abnormal ECG findings predisposing to Arrhythmia (eg. Wolff-Parkinson-White syndrome or long QT), the Arrhythmia nurses may be contacted for advice.

Email: NHS net: clare.vickers1@nhs.net

Telephone: 01422 223543 (answerphone available)

All patients will be offered an appointment within two weeks of referral, if appropriate

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Rivaroxaban

Contraindications; Allergy, Pregnancy, Lactating, Cancer, Liver failure, Renal Failure (GFR <15), Oesophageal varacies, Recent Major Surgery/Trauma/Bleed

Dose; 15mg OD (eGFR 15-49ml/min)
20mg OD (eGFR $\geq$ 50ml/min)

Pharmacy: Must collect from hospital pharmacy 09-17:00 as they will provide counseling [could use a Daltaparin if out of hours)