

## Electrophysiology (EP) Clinics at Western Health:

Western Health provides the following Specialist Clinics for patients who require assessment and management of electrophysiological conditions. Patients will be triaged into management pathways according to specific clinical requirements:

## Conditions not seen in Electrophysiology Clinics at Western Health:

- Patients with undocumented palpitations, normal ECG and no red flags, seen in the Emergency Department that have not been previously assessed by Primary Care for palpitations should be assessed by GPs for baseline investigations. Further referral to EP clinic can then be considered by GP if evidence of arrhythmia correlating with symptoms found or recurrent ED presentations
- Patients with palpitations < 15 minutes duration without any other cardiac symptoms
- Patients with sinus arrhythmia
- Patients with mild or brief orthostatic dizziness (lasting < 30 seconds)
- Dizziness due to a medicine or hypoglycaemia
- Dizziness due to chronic fatigue syndrome
- Isolated event of atrial fibrillation that has resolved (e.g. post-infection).
- Patients with known atrial fibrillation that are stable (that is heart rate is stable and the patient is on anticoagulation) and not for further active management
- Adult congenital heart disease (ACHD) patients - redirect to the [ACHD service at RMH](#)
- Patients that are already under ongoing care of a cardiologist

## Cardiac Alarm Symptoms (present directly to emergency department):

Patients should be directed to the emergency department if they present with alarm symptoms including but not limited to:

- Suspected pulmonary embolism or aortic dissection
- Suspected acute coronary syndrome
- Chest pain with any of the following:
  - severe dyspnoea
  - syncope or pre-syncope
  - respiratory rate > 30 breaths per minute
  - tachycardia > 120 beats per minute
  - systolic blood pressure < 90 mmHg
  - heart failure or suspected pulmonary oedema
  - ST segment elevation or depression
  - complete heart block
  - new left bundle branch block.
- Hypertensive emergency (blood pressure > 220/140)
- Severe hypertension with systolic blood pressure > 180 mmHg with any of the following:
  - headache
  - confusion
  - blurred vision
  - retinal haemorrhage
  - reduced level of consciousness
  - seizure(s)
  - proteinuria
  - papilloedema
- A pregnant woman with pre-eclampsia with uncontrolled severe hypertension (i.e. diastolic blood pressure > 110 mmHg or systolic blood pressure > 170 mmHg). Pregnant women >16 weeks should present to Maternity Assessment Clinic (MAC) Joan Kirner Women's & Children building, <16 weeks should present to ED.
- Syncope or pre-syncope with any of the following:
  - exertional onset
  - chest pain
  - persistent hypotension (systolic blood pressure < 90 mmHg) or bradycardia (< 50 beats per minute) on electrocardiogram (ECG)

# Western Health Specialist Clinics Access & Referral Guidelines

- evidence of second, or third-degree block on electrocardiogram (ECG)
- severe, persistent headache
- focal neurological deficits
- preceded by, or associated with, rapid palpitations
- known ischaemic heart disease or reduced left ventricular systolic function
- associated with rapid (>200bpm) supraventricular tachycardia (SVT), paroxysmal atrial fibrillation or ventricular tachycardia (VT)
- 'pre-excited' QRS wave on electrocardiogram (ECG)
- suspected malfunction of a pacemaker or implantable cardioverter defibrillator (ICD)
- absence of prodrome
- associated injury
- Occurs while supine or sitting without warning

## Access & Referral Priority Electrophysiology Clinic:

The clinical information provided in your referral will determine the triage category. The triage category will affect the timeframe in which the patient is offered an appointment.

<p style="text-align: center;"><b>URGENT</b></p> <p style="text-align: center;"><b>Appointment timeframe 30 days.</b></p>	<p style="text-align: center;"><b>ROUTINE</b></p> <p style="text-align: center;"><b>Appointment timeframe greater than 30 days, depending on clinical need.</b></p>
<ul style="list-style-type: none"> <li>● Atrial fibrillation with signs of heart failure or reduced LV function that does not require presentation to emergency</li> <li>● Atrial fibrillation/Atrial flutter with frequent ED presentations due to poorly controlled rate or rhythm.</li> <li>● Unexplained or symptomatic ventricular arrhythmias that are clinically stable (after ED review), especially in patients with structural heart disease or a history of sudden cardiac arrest.</li> <li>● Persistent or symptomatic bradycardia deemed clinically stable but requiring expedited review for evaluation for pacemaker implantation</li> </ul>	<ul style="list-style-type: none"> <li>● Atrial fibrillation: new or stable without features of concern. Features of concern include:               <ul style="list-style-type: none"> <li>○ Haemodynamic instability</li> <li>○ Severe shortness of breath</li> <li>○ Severe chest pain</li> <li>○ Syncope</li> <li>○ Evidence of pre-excitation</li> </ul> </li> <li>● Adult patients presenting with documented arrhythmia now clinically stable or undocumented palpitations where baseline investigations are normal and there is suspicion of arrhythmic cause of symptoms. Prior to referral to clinic ensure other causes of palpitations have been excluded</li> <li>● Documented SVT with evidence of pre-excitation on ECG with history of palpitations but no syncope</li> <li>● Recurrent syncope previously investigated with undetermined cause and that may be related to arrhythmias or conduction disorders for consideration of loop recorder monitoring</li> <li>● Heart failure patients requiring evaluation for implantable cardioverter-defibrillator (ICD) or biventricular pacemaker (CRT) therapy, particularly if the arrhythmia burden is contributing to the heart failure</li> <li>● Long QT Syndrome or Other Inherited Arrhythmia Syndromes               <ul style="list-style-type: none"> <li>○ If there is suspicion of congenital arrhythmic conditions or a family history of sudden cardiac death</li> </ul> </li> </ul>

## Condition Specific Referral Guidelines:

Key information enables Western Health to triage patients to the correct category and provide treatment with fewer visits to specialist clinics, creating more capacity for care. If key information is missing, you may be asked to return the referral with the required information.

Condition:	Key Information Points:	Clinical Investigations:
<p>Palpitations with any of the following:</p> <ul style="list-style-type: none"> <li>- Abnormal electrocardiogram (ECG)</li> <li>- Abnormal echocardiogram</li> <li>- Other cardiac disease</li> <li>- Functional impact of symptoms on daily activities including impact on work, study, or carer role</li> <li>- Family history of sudden cardiac death or structural heart disease.</li> </ul>	<ul style="list-style-type: none"> <li>• Details of all relevant signs and symptoms including the duration and frequency of the episodes of palpitations, past emergency presentations or hospital admissions for palpitations.</li> <li>• Details of possible causes including probable or confirmed SARS CoV-2 (COVID-19) infection or Long COVID</li> <li>• Current and complete medication history (including non-prescription medicines, herbs and supplements)</li> <li>• Any family history of sudden cardiac death</li> <li>• If the person identifies as an Aboriginal and/or Torres Strait Islander</li> </ul>	<ul style="list-style-type: none"> <li>• Current and previous 12 lead electrocardiogram (ECG) tracings, particularly those during the episodes of palpitations</li> <li>• Urea and electrolyte</li> <li>• Liver function tests</li> <li>• Thyroid stimulating hormone (TSH)</li> </ul> <p><b>Provide if available</b></p> <ul style="list-style-type: none"> <li>• Holter monitor report/tracings</li> <li>• Event monitor or smartwatch tracings</li> <li>• Echocardiogram report</li> </ul>
<p>New episode(s) of syncope or pre-syncope (after any emergency assessment) or recurrent syncope with undetermined cause</p>	<ul style="list-style-type: none"> <li>• Description of syncopal or pre-syncopal events and associated features</li> <li>• Lying or sitting / standing blood pressure</li> <li>• Relevant medical history</li> <li>• Current and complete medication history (including non-prescription medicines, herbs and supplements and recreational or injectable drugs).</li> <li>• If the person identifies as an Aboriginal and Torres Strait Islander</li> <li>• Any family history of sudden cardiac death or cardiac disease</li> </ul>	<ul style="list-style-type: none"> <li>• Recent electrocardiogram (ECG) tracings, relevant to syncopal or pre-syncopal events</li> </ul> <p><b>Provide if available</b></p> <ul style="list-style-type: none"> <li>• Any imaging results that show the presence of impaired left ventricular function</li> <li>• Holter monitor report/tracings</li> <li>• Event monitor or smartwatch tracings</li> <li>• Echocardiogram report</li> <li>• Urea and electrolytes</li> <li>• FBE</li> <li>• TSH</li> </ul>
<p>Atrial Fibrillation</p>	<ul style="list-style-type: none"> <li>• Details of all relevant signs &amp; symptoms</li> <li>• Details of previous medical management including the treatment and response</li> <li>• Current and complete medication history (including non-prescription medicines, herbs and supplements)</li> <li>• Past medical history and comorbidities</li> <li>• Details of possible link to probable or confirmed SARS CoV-2 (COVID-19) infection or Long COVID</li> <li>• Any family history of cardiac disease or sudden cardiac death</li> <li>• If the person identifies as an Aboriginal and/or Torres Strait Islander</li> </ul>	<ul style="list-style-type: none"> <li>• Current and previous 12 lead electrocardiogram (ECG) tracings, particularly those demonstrating the arrhythmia</li> <li>• Liver function tests</li> <li>• Urea and electrolyte</li> <li>• Full blood examination</li> <li>• Thyroid stimulating hormone (TSH) level</li> </ul> <p><b>Provide if available</b></p> <ul style="list-style-type: none"> <li>• Results of other investigations (e.g. echocardiogram, chest x-ray, sleep studies)</li> <li>• Holter monitor report/tracings</li> <li>• Event monitor or smartwatch tracings</li> <li>• International normalised ratio (INR) result</li> <li>• CHA2DS2-VA risk score (see Appendix 1)</li> </ul>

# Western Health Specialist Clinics Access & Referral Guidelines

## Appendix 1: CHA2DS2-VA Risk Score; Definitions and points:

Score	Points	Definition
C	1	Congestive heart failure—recent signs, symptoms or admission for decompensated heart failure; this includes both HFrEF and HFpEF, or moderately to severely reduced systolic left ventricular function, whether or not there is a history of heart failure
H	1	History of Hypertension, whether or not BP is currently elevated
A <sub>2</sub>	2	Age ≥75 years
D	1	Diabetes
S <sub>2</sub>	2	History of prior Stroke or TIA or systemic thromboembolism
V	1	Vascular disease, defined as prior myocardial infarction or peripheral arterial disease or complex aortic atheroma or plaque on imaging (if performed)
A	1	Age 65–74 years

AF, atrial fibrillation; BP, blood pressure; HFpEF, heart failure with preserved ejection fraction; HFrEF, heart failure with reduced ejection fraction; TIA, transient ischaemic attack.

### Scoring

- Score ≥ 2 (men) or ≥ 3 (women) oral anticoagulation is **recommended** for those with non-valvular atrial fibrillation (N-VAF)
- Score 1 (men) or 2 (women) **consider** oral anticoagulation for those with N-VAF
- Score 0 (no clinical risk factors) anticoagulation (or antiplatelet medicine) **not recommended** for those with N-VAF

Sourced from: Brieger, David, et al. "National Heart Foundation of Australia and Cardiac Society of Australia and New Zealand: Australian clinical guidelines for the diagnosis and management of atrial fibrillation 2018." *Medical Journal of Australia* 209.8 (2018): 356-362 <https://doi.org/10.1016/j.hlc.2018.06.1043>