



Acute Rheumatic Fever - Investigation and Initial Management Guideline

1. Guiding Principles

Acute Rheumatic Fever (ARF) and Rheumatic Heart Disease (RHD) continue to cause significant morbidity in children in Western Australia and can be under-recognised by clinicians who are unfamiliar with these conditions.

ARF most commonly occurs in children aged 5-14 years. Aboriginal and Torres Strait Islander people living in remote and rural settings are known to be at elevated risk. Other high-risk groups include people with a family or household contact history of ARF/RHD, Aboriginal and Torres Strait Islander people living in urban settings, Māori and Pacific Islander people, and immigrants from some developing countries.

Accurate and timely diagnosis of ARF is critical to avoid progression to RHD:

- under-diagnosis of ARF may result in risk of recurrence,
- over-diagnosis of ARF will result in a long period of unnecessary treatment.

2. Guideline

Clinical Assessment

- ARF symptoms can be subtle and include:
 - Joint pain, tenderness, redness, swelling or limping
 - Fever
 - $\geq 38.0^{\circ}\text{C}$ in high risk populations,
 - $\geq 38.5^{\circ}\text{C}$ in low risk populations,
 - New cardiac murmur
 - Abnormal movements of the face, tongue, hands or feet (Sydenham's chorea)
 - Rash (erythema marginatum) or subcutaneous nodules (rare)
- The [RHDAustralia Guideline](#) and [App](#) can assist with guiding assessment.

All suspected, new, or recurrent cases of ARF **must** have:

- **Admission to hospital** to monitor progress and to ensure accurate diagnosis, patient and family education, and commencement of secondary prophylaxis prior to discharge.
- **Consultation with regional paediatrician or paediatric cardiologist** (adult physician or cardiologist if age over 16 years).
- Investigations including: echocardiogram, ESR, FBC, CRP, ASOT, anti-DNase B, ECG, and swabs from sore throat or infective skin lesions if present (culture for Strep A). Consider investigations for relevant differential diagnoses.

- Use the reference ranges for streptococcal serology, P-R interval, and inflammatory markers provided in the [RHDAustralia Guideline](#).
- Echocardiogram may be delayed in consultation with a cardiologist if there are no clinical signs of carditis.

Management of ARF

- Following specialist consultation, administer intramuscular benzathine benzylpenicillin G (dosing as per [RHDAustralia Guideline](#)).
- Treat symptoms and complications of ARF as per the [RHDAustralia Guideline](#).
- ARF is notifiable in Western Australia. All episodes, whether initial or recurrent, probable, possible, or definite, are to be notified to the WA RHD Register using the specific [notification form](#).

3. Definitions

Acute Rheumatic Fever (ARF)	An illness caused by an immunological reaction to infection with Strep A. It causes acute, generalised, inflammatory response and can damage the heart valves.
Rheumatic Heart Disease (RHD)	Damage to one or more heart valves that remains after an episode of acute rheumatic fever (ARF) is resolved. It is caused by an episode or recurrent episodes of ARF, where the heart has become inflamed.
Group A Streptococcus	A gram positive bacteria that is a common cause of infection of the skin or pharynx, and can cause sepsis. Also referred to as <i>Streptococcus pyogenes</i> .

4. Roles and Responsibilities

All Staff are required to work within policies and guidelines to make sure that WACHS is a safe, equitable and positive place to be.

5. Compliance

Failure to comply with this policy document may constitute a breach of the WA Health Code of Conduct (Code). The Code is part of the [Integrity Policy Framework](#) issued pursuant to section 26 of the [Health Services Act 2016](#) (WA) and is binding on all WACHS staff which for this purpose includes trainees, students, volunteers, researchers, contractors for service (including all visiting health professionals and agency staff) and persons delivering training or education within WACHS.

WACHS staff are reminded that compliance with all policies is mandatory.

6. Records Management

All WACHS clinical records must be managed in accordance with [Health Record Management Policy](#)

7. Evaluation

Monitoring of compliance with this document is to be carried out by clinical incident monitoring via [Datix CIMS](#).

8. Standards

[National Safety and Quality Health Service Standards](#): 1.27, 5.10, 5.11, 5.13

9. Legislation

[Health \(Rheumatic Heart Disease Register of Western Australia\) Regulations 2015](#)

10. References

1. RHD Australia (ARF/RHD writing group). The 2020 Australian guideline for prevention, diagnosis and management of acute rheumatic fever and rheumatic heart disease (3rd edition) [Internet] 2020. Available from: <https://www.rhdaustralia.org.au/arf-rhd-guideline> [Accessed 19 May 2020]
2. RHD Australia (ARF/RHD writing group). RHD Australia App. [Internet] Available from: <https://www.rhdaustralia.org.au/apps> [Accessed 19 May 2020]
3. RHD Australia [Internet] Menzies School of Health Research. Available from: <https://www.rhdaustralia.org.au/> [Accessed 19 May 2020]
4. Government of Western Australia Department of Health [Internet] WA RHD Register. Available from: https://ww2.health.wa.gov.au/Articles/U_Z/WA-rheumatic-heart-disease-register [Accessed 19 May 2020]

11. Related Forms

[Notification of Acute Rheumatic Fever and Rheumatic Heart Disease](#)

12. Related Policy Documents

WACHS [Acute Rheumatic Fever Poster](#)

WACHS [Chronic Conditions Alert Procedure](#)

WACHS [Assessment and Management in the Emergency Department – Clinical Practice Standard](#)

WA Health Nurse Administration of Intramuscular Benzathine Benzylpenicillin G for the Rheumatic Heart Disease Program [in development]

13. Policy Framework

[Clinical Governance, Safety and Quality](#)

**This document can be made available in alternative formats
on request for a person with a disability**

Contact:	Kimberley Regional Paediatrician (G. Cleland)		
Directorate:	Medical Services	EDRMS Record #	ED-CO-20-40321
Version:	1.00	Date Published:	14 July 2020

Copyright to this material is vested in the State of Western Australia unless otherwise indicated. Apart from any fair dealing for the purposes of private study, research, criticism or review, as permitted under the provisions of the *Copyright Act 1968*, no part may be reproduced or re-used for any purposes whatsoever without written permission of the State of Western Australia.