2022 – 2026
IMPLEMENTATION PLAN
2020 Australian guideline for the prevention, diagnosis and management of acute rheumatic fever and rheumatic heart disease (3.2 edition, March 2022)
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Acronyms and Abbreviations

AIHW  Australian Institute of Health and Welfare
ARF  Acute rheumatic fever
BPG  Benzathine benzylpenicillin G
C4C  Champions4Change
CARPA (HCM)  Central Australia Rural Practitioners Association (Health Care Manuals)
CHIS  Community Health Information System
CRANA  Council of Remote Area Nurses of Australia Inc
GRADE  Grading of Recommendations, Assessment, Development and Evaluations
Implementing Organisations  RHD Register and Control Programs, Public Health and Disease Surveillance Units, Environmental Health Units, primary, secondary and tertiary health care providers, peak and industry bodies (and their members).
KAMSC  Kimberley Aboriginal Medical Services Council
NHMRC  National Health and Medical Research Council
PCCM  Primary Clinical Care Manual
PCIS  Primary Care Information System
PHN  Primary Health Network
RHD  Rheumatic heart disease
RPHCM  Remote Primary Health Care Manuals
Strep A  Group A streptococcus
THOM  Tropical Health Orientation Manual
WBM  Women’s Business Manual
WHF  World Heart Federation
WHO  World Health Organisation
1. Introduction

Evidence-based clinical practice guidelines are important for acute rheumatic fever (ARF) and rheumatic heart disease (RHD) since these conditions are difficult to diagnose, are not commonly seen beyond the Aboriginal and Torres Strait Islander population such that healthcare providers tend to lack expertise with diagnosis and management, and can have severe consequences for the people affected.

The 2020 Australian guideline for the prevention, diagnosis and management of acute rheumatic fever and rheumatic heart disease (3.2 edition, March 2022) (hereafter, Guidelines) were produced by RHDAustralia and published in February 2020 to help support clinical best practice.

This Guideline Implementation Plan (hereafter, Plan) outlines a systematic approach for RHDAustralia’s support to jurisdictions, health providers, key organisations, and the community, to implement best practice messaging and care which is consistent with the Guidelines.

RHDAustralia will support implementing organisations, lead national promotion of the Guidelines, evaluate uptake of the Guidelines, identify barriers to implementation, and collate and assess emerging evidence to inform Guideline updates.

The Plan describes

- the objectives of Guideline implementation.
- RHDAustralia’s role to support implementation.
- existing and planned activities and strategies to raise awareness of the Guideline and promote best practice consistent with its recommendations.
- recommended roles and responsibilities of other organisations to implement Guideline recommendations.

2. The Guideline

Based on the 2012 edition, the 2020 Guideline was written by Australian clinical and public health experts and researchers and policy-makers, and was developed in collaboration with key stakeholders and an Aboriginal and Torres Strait Islander advisory group. The Guideline provides national standards, recommendations and guidance for the prevention, diagnosis and management of ARF and RHD that is clinically sound and culturally safe.
Key information in the Guideline is categorized in one of three groups: as a standard of care (e.g., in line with international standards), a best practice recommendation (evidence-based), or as guidance (recommended process for providing care).

Several new chapters and updates to existing content were included in the 2020 Guideline edition to reflect new and emerging evidence and consumer feedback. This includes a focus throughout the document which places people, families and communities (culture) at the centre of care.

2020 Guideline Chapters:

1. Introduction (including summary of changes from previous edition)
2. Culture and Workforce
3. Burden of acute rheumatic fever and rheumatic heart disease
4. Primordial prevention and social determinants of health
5. Primary prevention
6. Diagnosis of acute rheumatic fever
7. Management of acute rheumatic fever
8. Diagnosis of rheumatic heart disease
9. Screening for rheumatic heart disease
10. Secondary prophylaxis
11. Management of rheumatic heart disease
12. Women and girls with rheumatic heart disease
13. Rheumatic heart disease control programs
14. New technologies

A Guideline Development Framework provides a full summary of the development process in line with the NHMRC Standards for Guidelines.

3. The Plan

This Plan has been informed by the Guideline Development Framework and work undertaken by RHDAustralia implementing partners during 2020 and 2021.

3.1 Objective

The objective of Guideline implementation is to increase awareness and understanding of best practice ARF and RHD prevention, diagnosis and management, and self-management among patients, communities, and the healthcare workforce by
• providing access to information and resources that educate and empower people living with ARF and RHD.
• reducing variation in clinical practice which does not align with best practice.
• facilitating access for health service organisations to the Guideline and other relevant documents.
• developing frameworks to support the sustainability of an evidence-based Guideline.

3.2 Scope

The scope of this Plan is to describe the activities, strategies and responsibilities to implement the standards and recommendations in the 2020 Guideline.

The Plan does not quantify costs and workforce capacity needed to implement Guideline standards and recommendations. Rather, we will identify if resource or other constraints (e.g., conflict with local protocols, COVID-19 restrictions) have impacted effective implementation.

4. Guideline Implementation

4.1 Roles & responsibilities

Implementing organisations are responsible for updating and aligning local policies, systems and practice (where applicable) which is consistent with the Guideline recommendations, and for promoting uptake of the recommendations and maintaining a skilled local healthcare workforce. Implementing organisations are also responsible to identify and address local barriers to providing best practice care.

The standards, recommendations and clinical guidance in the Guideline should be interpreted within the context of local legislation and individual clinical scenarios. It is both necessary and important that regional and local strategies comply with relevant legislation and policy and be responsive to contextual issues. RHDAustralia also recognizes the role and responsibility of individual clinicians implementing the Guideline.

RHDAustralia will implement the Guideline by

- disseminating the Guideline through stakeholders to raise awareness of its purpose and content.
- conducting workforce education and training which accurately reflects its content.
- developing and disseminating clinical tools and resources which accurately reflect its content.
- supporting implementing organisations to disseminate the Guideline, provide workforce training, develop clinical tools and resources, and evaluate activities.
• evaluating and monitoring relevant activities.

RHDAustralia’s Champions4Change program connects with, and provides support for, people living with ARF and RHD and communities at risk. A suite of consumer resources based on the Guideline is being developed in collaboration with and for Aboriginal and Torres Strait Islander communities.

RHDAustralia has an established system for engaging with Jurisdictional RHD control programs and community Champions4Change representatives. These opportunities, as well as our frequent communications with implementing organisations, help guide decisions about effective implementation strategies.

4.2 Completed and ongoing activities

Completed Guideline implementation activities include:

• Updated Guideline app and ARF diagnosis calculator (for Android, iOS and iPad)
• Key information in the Guideline extracted and highlighted
• Updated Learning Management System (to support clinical e-learning)
• E-learning modules based on key information or Guideline priority topics
• Supported updates to the CARPA (HCM) and Therapeutic Guidelines.
• Supported updates to the PHN Pathways (for ARF and RHD)
• Monitoring and fielding responses to queries lodged through the online portal

The following activities are in progress, and will continue indefinitely and as required.

• Guideline distribution (initial run of printed copies) and link to live web-based document
• Clinical workshops and community information sessions

4.3 Implementation priorities and other planned activities

Clinical implementation priorities

Six elements in the 2020 Guideline have been identified as priorities for national implementation, including:

1. Pharmacological treatment of Strep A skin sore and throat infections.
2. Criteria for ARF diagnosis.
3. Management of suspected ARF.
5. Secondary prophylaxis of ARF.
RHDAustralia has outlined a plan (Appendix 1) to support integration of these into the relevant systems and practice. RHDAustralia will support implementing organisations and individuals to address and implement the priority elements, and evaluate success.

**Priority topic areas campaign**

Following consultation with members of the Aboriginal and Torres Strait Islander community, RHDAustralia has identified six priority topic areas to support prevention, diagnosis, management, and self-management of ARF and RHD in the community. Key messaging will be consistent for, but targeted to, people living in high risk communities, members of the health workforce, and implementing organisations that have power to effect cultural and clinical change. Cultural awareness and culturally safe health care provision will underpin all topics in the campaign. Topic areas include:

- Culture at the centre of care
- ARF and RHD: the essentials
- Secondary prophylaxis
- Women and girls with RHD
- RHD in adolescents
- RHD in remote settings

Information and resources designed around best practice messaging for each topic area will be packaged into a *dilly bag* and disseminated through the primary healthcare sector and other implementing organisations, and via social media. Each month will highlight a different topic commencing prior to June 2022.

<table>
<thead>
<tr>
<th>Priority Area</th>
<th>Month 1</th>
<th>Month 2</th>
<th>Month 3</th>
<th>Month 4</th>
<th>Month 5</th>
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<td>Culture at the centre of care</td>
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<td>ARF and RHD Essentials</td>
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<td>Secondary prophylaxis</td>
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<td>Women and girls with RHD</td>
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<td>RHD in adolescents</td>
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<td>RHD in remote settings</td>
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5. **Evaluation and Monitoring**

5.1 Monitoring Guideline dissemination activity

RHDAustralia has the capacity to monitor website activity, including the number of resources downloaded within specific time periods. RHDAustralia will continue to monitor and compare the following activity each quarter:
• Number of Guidelines downloaded
• Number of summary and supplementary documents downloaded
• App download and usage
• Number of eLearning modules completed
• Number of primary care and other staff attending education and training workshops

5.2 Monitoring implementation of Guideline standards and recommendations

RHDAustralia has an established process for meeting with jurisdictional RHD Control Programs. During these meetings, and through our representation on Control Program Advisory Groups and subcommittees, we will review successes and barriers to Guideline implementation, particularly related to the elements in Appendix 1.

RHDAustralia will also use existing relationships with peak and professional bodies to engage around uptake and implementation of relevant recommendations.

A Guideline implementation report will be produced every six months.

5.3 Guideline update & addendum process

National and international evidence related to ARF and RHD is reviewed regularly to ensure that the Guideline content aligns with best practice information to support clinical care. RHDAustralia will

• establish a robust and transparent review and consultation process. (Figure 1)
• identify and convene relevant content experts to provide a review of new and emerging evidence related to the prevention, diagnosis, and management of ARF and RHD.
• consider the implementation of any new recommendations and implications for practice and policy.
• update Guideline content (and include version history).
• communicate and disseminate new content.

Content expert groups

Content expert group members will vary depending on the nature and content of the new or emerging evidence. At a minimum, the group will include RHDAustralia clinical and management staff, relevant 2020 Guideline authors, research authors and investigators (where possible), and other, notable expert as indicated. The initial membership will be decided by RHDAustralia with additional members identified or recommended by the expert group.
Consultation and consensus

Content expert groups will review evidence and agree whether the evidence supports an update to Guideline recommendations. The decision-making process for proposed Guideline changes will be consistent with the 2020 Guideline Development; i.e., using the GRADE approach as appropriate and in accordance with the NHMRC Standards.

Where the evidence warrants an update to the Guideline, a draft recommendation will be developed for consultation with a broader group. This will include consultation on the implementation of the recommendation, e.g. implications for practice and policy and any risks and challenges, and ensure the recommendation is actionable (NHMRC Standard 7). Consultation may also include consumers (people with lived experience of ARF and/or RHD) and policy makers.

The Guideline review process will be documented by RHDAustralia, and the rationale for new content will be published alongside the guideline update.

If evidence is significant but does not warrant an update to the Guideline, RHDAustralia may publish a fact sheet or position paper commenting on the evidence and decision not to recommend an update to the Guideline.

Figure 1. Process for updating the Guideline.
Communicating Guideline Updates

RHDAustralia will communicate new information through the following process:

1. Changes will be included in the electronic Guideline (PDF) available on the RHDAustralia website. A version history table will include version number, date, and summary of changes.
2. Relevant apps and training materials available on the RHDAustralia website will be updated to include the changes.
3. Additional position papers and fact sheets addressing contentious issues and high priority topics will be available on the RHDAustralia website.
4. Changes (including relevant documents) will be communicated directly to implementing organisations, and other guideline developers.
5. The consultation and consensus process will be documented, and implementation monitored and evaluated.
**Appendix 1: Implementation and evaluation of priority standards and recommendations**

### Treatment of Strep A Infections

<table>
<thead>
<tr>
<th>Strength of recommendation</th>
<th>Context</th>
<th>2020 Guideline references</th>
<th>Target/Audience</th>
<th>Activity/Strategy</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEST PRACTICE</td>
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<td></td>
<td>Skin sore assessment and management for high risk individuals. Sore throat assessment and management for high risk individuals.</td>
<td>Table 5.2. Recommended antibiotic treatment for Strep A sore throat / tonsillitis (p57) <a href="#">Supplementary information</a></td>
<td>Primary healthcare staff Jurisdictional ARF/RHD registers Primary Health Care software (PCIS, Best Practice, Communicare, CHIS, Ferret) PHNs</td>
<td>Workforce education and training (including e-learning and workshops) Electronic record systems updated (e.g. Health Information Pathways, practice and prescribing software) Clinical practice guidelines and protocols updated (Therapeutic guidelines, PCCM, CARPA HCMs, RPHCM, WBM, Australian Medicines Handbook, THOM, KAMSC protocols) Existing and new locally produced resources aligned or updated (as indicated) Dissemination through peak and industry bodies Newsletter and journal articles published with peer representatives</td>
<td>Clinical practice adopted in primary care settings, evaluated through stakeholder surveys. Local and national protocols align with the Guideline</td>
</tr>
</tbody>
</table>

#### Supplementary information
- Table 5.1 Risk groups for primary prevention of ARF (p57)
- Table 5.4. Symptoms and signs of a sore throat / tonsillitis (p61)
- Figure 5.3. Assessment for sore throat (p62)
- Table 5.2. Recommended antibiotic treatment for Strep A sore throat / tonsillitis (p57)
- Table 5.3. Recommended antibiotic treatment for Strep A skin sores (p58)

### Managing Suspected ARF

<table>
<thead>
<tr>
<th>Strength of recommendation</th>
<th>Context</th>
<th>2020 Guideline references</th>
<th>Target/Audience</th>
<th>Activity/Strategy</th>
<th>Evaluation</th>
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<tbody>
<tr>
<td>BEST PRACTICE</td>
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<td>Hospital admission for all people with suspected and confirmed ARF. Echocardiography for all suspected and confirmed ARF. Culturally safe care (family)</td>
<td>Anyone suspected to have ARF should be admitted to a hospital within 24-72 hours for echocardiography and specialist review. (p72) Echocardiogram can enable a confirmation of ARF by demonstrating</td>
<td>Primary care health staff Tertiary care health staff including paediatricians, physicians, cardiologists, cardiac sonographers.</td>
<td>Workforce education and training (including e-learning and workshops) Clinical practice guidelines and protocols updated (Therapeutic guidelines, PCCM, CARPA HCMs, RPHCM, WBM, Australian Medicines Handbook, THOM, KAMSC protocols) Consumer satisfaction around cultural safety, evaluated through</td>
<td>RHD register audits of ARF notifications with associated hospitalisation and echocardiogram.</td>
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**2022–2026 Implementation Plan:** 2020 Australian guideline for prevention, diagnosis and management of acute rheumatic fever and rheumatic heart disease (3.2 edition, March 2022)
engagement, interpreters, Aboriginal Health Practitioner involvement in delivery of care, advice about prognosis and management) 
carditis which may not be clinically evident. It is also used to establish a baseline of cardiac status, and to determine whether valve damage is present and if so, to determine the severity. (p72) 
Cultural considerations are central (p2) 

**CRITERIA FOR ARF DIAGNOSIS**

<table>
<thead>
<tr>
<th>Strength of recommendation</th>
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<th>2020 Guideline references</th>
<th>Target/Audience</th>
<th>Activity/Strategy</th>
<th>Evaluation</th>
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</table>
| INTERNATIONAL STANDARD    | Diagnosis (classification) of ARF by risk group as:  
  • definite ARF (confirmed)  
  • probable ARF (highly suspected)  
  • possible ARF (uncertain)  
  • definite ARF recurrence  
  • probable ARF recurrence  
  • possible ARF recurrence | Table 6.2. 2020 Updated Australian criteria for ARF diagnosis (p74)  
Table 6.1. Risk groups for ARF (p73)  
**Supplementary Information**  
Table 6.3. Suggested upper limits of normal for serum streptococcal antibody titres in children and adults (p75)  
Table 6.4. Upper limits of normal for P-R interval (p75)  
Table 6.10 Minimal echocardiographic criteria to allow a diagnosis of pathological valvular regurgitation (p95) | Primary and tertiary healthcare staff  
Jurisdictional RHD Control Program programs (RHD registers)  
Public Health / Disease Control Units  
AIHW (national reporting)  
Jurisdiction electronic record systems  
Primary Health Care software (PCIS, Best Practice, Communicare, CHIS, Ferret)  
PHNs | Updates to:  
• RHDAustralia ARF diagnosis app  
• ARF notification forms  
• Jurisdictional ARF/RHD registers  
Disseminate ARF diagnosis app and other updates through peak and industry bodies  
Electronic record systems updated (e.g. Health Information Pathways, practice and prescribing software)  
Clinical practice guidelines and protocols updated (Therapeutic guidelines, PCCM, CARPA HCMs, RPHCM, WBM, Australian Medicines Handbook, THOM, KAMSC protocols)  
Newsletter and journal articles published with peer representatives | Relevant electronic records (including registers) reflect international ARF criteria.  
Local and national protocols align with the Guideline.  
Jurisdiction and national reports describe ARF according to international criteria. |
### CRITERIA FOR RHD DIAGNOSIS

<table>
<thead>
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<tr>
<td>INTERNATIONAL STANDARD</td>
<td>WHF echocardiogram criteria for RHD diagnosis</td>
<td>Table 8.5. 2012 World Heart Federation criteria for echocardiographic diagnosis of RHD (p135)</td>
<td>Medical specialists, cardiologists, cardiac sonographers</td>
<td>Accredited education sessions delivered by peers</td>
<td>Relevant electronic records (including registers) reflect international RHD criteria. Local and national protocols align with the Guideline. Relevant cardiac sonography guidelines and training materials align with the Guideline</td>
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<td>Supplementary information</td>
<td>Box 8.1. Echocardiography machine settings (p135)</td>
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<td>Disseminate information through peak and industry bodies</td>
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<td>Table 8.2. Echocardiographic features of RHD (p132)</td>
<td>Table 8.4. Morphological features of RHD (p134)</td>
<td></td>
<td>Clinical practice guidelines and protocols updated (Therapeutic guidelines, PCCM, CARPA HCMs, RPHCM, WBM, Australian Medicines Handbook, THOM, KAMSC protocols)</td>
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<td>Newsletter and journal articles published with peer representatives</td>
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### SECONDARY PREVENTION OF ARF

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<th>Strength of recommendation</th>
<th>Context</th>
<th>2020 Guideline references</th>
<th>Target/Audience</th>
<th>Activity/Strategy</th>
<th>Evaluation</th>
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<tr>
<td>NATIONAL STANDARD</td>
<td>Secondary prophylaxis treatment to prevent recurrent ARF</td>
<td>Table 10.1. Recommended antibiotic regimens for secondary prophylaxis (166)</td>
<td>Primary and tertiary healthcare staff Jurisdictional RHD Control Program programs (RHD registers) Public Health / Disease Control Units AIHW (national reporting) Jurisdiction electronic record systems Primary Health Care software (PCIS, Best Practice, Communicare, CHIS, Ferret) PHNs</td>
<td>Updates to: RHDAustralia ARF diagnosis app ARF notification forms Jurisdictional ARF/RHD registers Disseminate the diagnosis app and other updates through peak and industry bodies Electronic record systems updated (e.g. Health Information Pathways, practice and prescribing software)</td>
<td>Relevant electronic records (including registers) and national reports reflect national standard for secondary prophylaxis delivery.</td>
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<td>BEST PRACTICE</td>
<td>Duration of secondary prophylaxis</td>
<td>Table 10.2. Recommended duration of</td>
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<td>Relevant electronic records (including</td>
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<td>Strength of recommendation</td>
<td>Context</td>
<td>2020 Guideline references</td>
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<tr>
<td>NATIONAL STANDARD</td>
<td>Antibiotic prophylaxis to prevent endocarditis</td>
<td>Table 11.6. Antibiotics for infective endocarditis prophylaxis (p224)</td>
<td>Primary healthcare staff</td>
<td>Dental and surgical, and primary care workforce education and training</td>
<td>Clinical and dental practice adopted, evaluated through stakeholder surveys.</td>
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<td>Supplementary information</td>
<td>Table 11.5. Cardiac conditions and procedures for which infective endocarditis prophylaxis is recommended (p223)</td>
<td>Dental and surgical staff</td>
<td>(including e-learning and workshops)</td>
<td>Local and national protocols align with the Guideline</td>
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<td>Jurisdictional ARF/RHD registers</td>
<td>Electronic record systems updated (e.g. Health Information Pathways, practice and prescribing software)</td>
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<td>Primary Health Care software</td>
<td>Clinical practice guidelines and protocols updated</td>
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<td>(PCIS, Best Practice, Communicare, CHIS, Ferret)</td>
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<td>PHNs</td>
<td>Existing and new locally produced resources aligned or updated (as indicated)</td>
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