

RHEUMATIC HEART DISEASE PROGRAM

1. General Information

The NT has some of the highest rates of Acute Rheumatic Fever (ARF) and Rheumatic Heart Disease (RHD) in the world. ARF is prevalent in Aboriginal populations of the NT and is most prevalent in children aged 5 to 15 years. ARF and RHD contribute considerable morbidity and a high risk of premature death.

The Rheumatic Heart Disease Program is a program area within the Centre for Disease Control (CDC) Unit. There are separate Central Australian and Top End teams, each comprising a Public Health Nurse (PHN) and an Administrative Officer (AO).

The primary aims of the RHD Program (as recommended by [WHO](#)) are to:

- support the uptake of and adherence to secondary prophylaxis
- improve clinical care and follow-up
- identify and register new and recurrent cases of ARF (Notifiable) and RHD
- provide education and training for health care providers
- provide education and health promotion to clients, families and the community
- conduct surveillance.

Rheumatic Heart Disease Register contact information

Central Australia

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Top End

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2. Definitions

Acute Rheumatic Fever (ARF): is an autoimmune response to bacterial infection with Group A streptococcus (GAS).

Rheumatic Heart Disease (RHD): is damage to the heart, specifically the mitral and/or the aortic valves occurring secondary to ARF.

Benzathine Penicillin (Long Acting Bicillin (LAB)/Pan Benzathine Penicillin): a form of penicillin providing long-lasting low levels of serum penicillin.

3. Responsibilities

3.1 Health Centre Clinical Staff

- Awareness of the prevalence of ARF and RHD in Aboriginal populations in the NT, and understand the processes of primary and/or secondary prevention and management
- Advise RHD Program of suspected cases of ARF/RHD
- Ensure client's permission / consent is obtained prior to their details being recorded on the RHD Register (see [RHD Consent Form and Fact Sheet](#))
- Recall and manage ARF/RHD clients according to [2006 National Heart Foundation ARF / RHD Guidelines](#) and CARPA STM
- Maintain relevant documentation, including medical records, [LAB Master Chart](#) and recall
- Ensure relevant information is entered into the [RHD Online Register](#) or forward paper-based information to the RHD team, including LAB Master Chart and any changes to the RHD Register Recall Report
- Liaise with the RHD Team as appropriate

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Endorsed by: Professional Practice Coordinator CNC RHD Program		
Release Date: May 2007		Next Review: December 2011

- Support visiting services / specialists, eg Cardiology, Echocardiography, Paediatrics, Oral Health Services, providing health care for RHD clients
- Support implementation and evaluation of RHD health promotion activities as appropriate

3.2 Medical Officers

- Assist in diagnosis and referral to the Regional Hospital for all new, recurrent or suspected episodes of ARF / RHD, with copies of referrals to RHD team
- Referral of clients for dental, echocardiograph, and specialist appointments with copies of referrals to RHD team
- Management follow up according to the [2006 National Heart Foundation ARF / RHD Guidelines](#). (See Management Guidelines for ARF and RHD [Flowchart](#))
- Utilise the [RHD Online Register](#) for client information relating to ARF / RHD
- Collaborate with health centre staff to develop care plans for clients, especially [Priority 1](#) clients

3.3 Specialists

- Cardiologists, Physicians and Paediatricians review as per 2006 National Heart Foundation ARF / RHD Guidelines (See Management Guidelines for ARF and RHD [Flowchart](#))
- Access the RHD Online Register for client information related to ARF / RHD

3.4 Rheumatic Heart Disease Team

- Provide education about ARF and RHD for clients and family members
- Disseminate expert clinical knowledge and skills and provide a resource service
- Maintain a helpdesk for health care providers
- Ensure client's permission / consent is obtained for their details to be recorded on the RHD Register (see [RHD Consent Form and Fact Sheet](#))
- Manage and maintain the integrity of the RHD Online Register
- Provide orientation and training in the use of the RHD Online Register
- Generate quarterly RHD Recall Reports for all remote clinics
- Reconcile health centre information with the RHD Register

4. Procedure

4.1 Prevention - Includes both primary and secondary prevention

Primary prevention averts the progression of a GAS throat or skin infection to ARF. People aged 2 - 25 years in Aboriginal communities, with a throat or skin infection, should be managed as per the 2006 National Heart Foundation ARF / RHD Guidelines and CARPA STM (pp 368 - 378).

Secondary prevention averts a recurrent episode of ARF or the progression to RHD. A person who has had ARF is at least 10 times more likely to have a recurrence, yet all recurrences of ARF are preventable through appropriate management. Prophylaxis as per the 2006 National Heart Foundation ARF / RHD Guidelines and CARPA STM (pp 365 - 367) is a priority recommendation.

Health centres maintain a client [recall](#) system to promote adherence to prophylaxis. The RHD Program sends blank LAB Master Charts to all health centres at the beginning of each year, and the health centre is required to return a copy of the ongoing chart back to the RHD team monthly, documenting the Benzathine Penicillin and date given to clients, during the year.

Alternatively the [RHD Online Register](#) provides a way for the health centre staff to view health centre RHD Patient List Reports, client recall reports and update provision of client prophylaxis which automatically projects future prophylaxis dates.

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4.2 Health Education

4.2.1 Client

It is important for the client and families to understand their disease, medicine and necessary follow-up. Educational resources are available in each health centre (eg video, flip chart, booklets) and on the [RHD Online Register](#) and should be used whenever possible.

Health centre staff should liaise with the RHD Program Coordinator about the type of ongoing education the client and parent/carer may require.

To promote increased client self-management and enhance prophylaxis compliance, the RHD Program staff have developed a *full moon calendar*. This is recommended as a prompt for RHD clients to remember when prophylaxis is due. See [07-03 Full Moon Calendars - Communiqué](#).

4.2.2 Staff

Update knowledge and skills on ARF / RHD at orientation and at regular intervals. Educational and management support resources available for staff include:

- [2006 National Heart Foundation ARF / RHD Guidelines](#)
- CARPA STM
- Staff RHD CD ROM – Rheumatic Fever Education
- Management Guidelines for ARF and RHD [Flowchart](#)
- RHD Online Register
- The Rheumatic Fever Story video and booklets
- [Low Literacy Flipchart](#)
- Full Moon Calendars

4.3 Documentation

When a diagnosis of ARF or RHD is suspected or confirmed, the following notifications are required.

- Report to the RHD Register all clients who have had an episode of ARF, or who are suspected of having RHD. Each client must sign or verbally consent to being on the register, see [Consent Form and Fact Sheet](#). Information on the register includes: name; age; community; dates of episodes of ARF and RHD; commencement and duration of prophylaxis; when reviews are due; and tests and surgical information.
- ARF is a notifiable condition under the [NT Notifiable Diseases Act](#). All new & recurrent cases of ARF must be reported to the Centre for Disease Control in the appropriate region of the NT. In general the Regional Hospital or RHD team provide notification on confirmation of the disease using the [Doctors/Hospital Report of Clinically Notifiable Conditions](#) form.

For ongoing RHD management, documentation includes:

Medical Records

- Document management in the clients' medical record, including progress notes and [Warfarin Dosage Chart](#)
- Maintain ARF / RHD clients on a [Chronic Disease Management Plan](#).

Recall

All client's names should be maintained on the [recall](#) system to ensure that annual review dates are rolled over and not missed. The LAB Master Chart or RHD Online Register Recall list is the tool used to track dates Benzathine Penicillin is given.

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Release Date:	May 2007		Next Review: December 2011

Paper-based recall system

Maintain names of clients on Benzathine Penicillin prophylaxis on the hard copy recall system.

- Complete details on the [LAB Master Chart](#), including the clients' name, date of birth, date the LAB was given (include visitors from other communities/regions and name of primary community), Warfarin (ticked where applicable) and send to the RHD Program monthly
- Inform client of the date next LAB is due and encourage to link their LAB dates to the full moon
- Plan recall for the next week of the full moon (see full moon needle calendars)
- Enter updates on the [RHD Online Register](#) or provide paper-based updates within two weeks of receipt, on the quarterly RHD Register Recall Report and return it to the RHD Program

RHD Online Register

- On the prophylaxis page complete the date of injection and nominate health centre
- Enter the date immunisations (influenza and pneumovax) are given to RHD clients
- Review / print out the RHD Patient List Report for the health centre and submit any changes to the RHD program for updating of the RHD Register
- Review / print the RHD Register Recall list for clients and submit any changes to the RHD Program for updating of the RHD Register
- Review the Prophylaxis Overdue Report for the health centre RHD clients
- Review the Prophylaxis Adherence Report for the health centre

PCIS: this replaces the paper-based recall system and provides the recall function.

Note: Developmental work is underway for the RHD Online Register to be integrated with PCIS.

4.4 Referral

4.4.1 Oral Health Services NT (Dental)

Bacteria enter the blood stream from infected teeth secondary to dental caries and periodontal infections. People with a past history of Rheumatic Fever, heart valve replacement or heart murmur should be encouraged to maximize their oral health to minimize the risk of acute bacterial endocarditis.

Oral Health Services can be provided by visiting services, or as priority dental appointments made with town-based services. Oral Health Services should have a record of ARF/RHD clients to be reviewed, and this can be accessed from the RHD Register and/or health centre. Prior to a planned community dental visit, health centre staff should update the RHD dental client list for the RHD team to forward to Oral Health Services, alternately the Oral Health Services can access the RHD Online Register to access the health centre RHD client list. Following the dental review, Oral Health Services will send the Notification of Dental Fitness form to the RHD Team.

Clinical staff should plan and prepare clients for the dental consultation prior to the visit. All clients in need of heart surgery must be dentally fit at least ten days prior, if their dental health has not been maintained, this surgery could potentially be delayed. health centre staff, along with the dental team, should promote maintenance of oral hygiene in these individuals.

4.4.2 Specialist (Physician, Cardiology, Echocardiography, Paediatrics)

Following diagnosis and management of the first acute episode, all clients require review by a specialist physician or cardiologist and/or paediatrician within three months to assess progress and ongoing management according to the [2006 National Heart Foundation ARF/RHD Guidelines](#) (See Management Guidelines for ARF and RHD [Flowchart](#)). Where possible, this service may be provided in the health centre through the [Specialist Outreach](#) Program, or

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alternately, the client may attend a Specialist clinic at a Regional Hospital. Prior to a planned community Specialist visit, health centre staff should update the RHD Specialist client list (eg Cardiac, Echo, etc) for the RHD team to forward to the relevant Specialist. Clinical staff should plan and prepare clients for the consultation prior to the visit.

4.4.3 Pregnancy

Normal circulatory changes during pregnancy can exacerbate any pre-existing valvular disease. Ideally, women with known rheumatic valvular disease should be assessed before pregnancy, and LAB injections should continue throughout pregnancy. All pregnant women with RHD require obstetrician review. Where possible, this service may be provided in the health centre through the [Specialist Outreach](#) Program, or alternately, the client may attend a specialist obstetrician clinic at a Regional Hospital. All [Priority 1](#) clients must have ongoing cardiology care.

4.4.4 Surgery

For clients requiring surgery, all RHD surgery is generally accessed through the Royal Darwin Hospital; Royal Adelaide Hospital or Flinders Medical Centre in Adelaide; and the Royal Children's Hospital in Melbourne, though alternative Hospitals may be used as required.

5. Forms

[LAB Master Chart](#), available from RHD Program or RHD Online Register

[Warfarin Dosage Chart](#), available from RHD Program or RHD Online Register

[Chronic Disease Management Plan](#) (HX63), available from Stores

[RHD Consent Form and Fact Sheet](#), available from RHD program or RHD Online Register

[Doctors/Hospital Report of Clinically Notifiable Conditions](#)

Notification of Dental Fitness - [Central Australia](#) or [Top End Adult](#), [Top End Children](#)

[Rheumatic Fever Penicillin Needle Chart](#), available from RHD Program or RHD Online Register

[Full Moon Calendar Clinic](#), available from RHD Program or RHD Online Register

[Hand Held Full Moon Calendar](#), available from RHD Program or RHD Online Register

6. References and Supporting Documents

Related Atlas Items:

[Chronic Disease Management Plans](#)

[Client Recall Systems](#)

[Notifiable Diseases](#)

[Specialist Outreach](#)

[RHD Online Register](#)

[07-03 Full Moon Calendars - Communiqué](#)

Full Moon Calendar Advice

[Diagnosis and Management of Acute Rheumatic Fever and Rheumatic Heart Disease in Australia – an evidence based review](#). 2006. National Heart Foundation of Australia and the Cardiac Society of Australia and New Zealand.

[NT Notifiable Diseases Act](#)

CARPA Standard Treatment Manual 5th Ed

[CARPA Standard Treatment Manual 4th Ed Reference Book](#)

Management Guidelines for ARF and RHD - [Flowchart](#)

CD ROM: Rheumatic Heart Disease – RAN, AHW and DMO Orientation

Northern Territory DHF Centre for Disease Control: Rheumatic Heart Disease Program NT

[World Health Organisation 2004](#). Report of a WHO Expert Consultation on Rheumatic Fever and Rheumatic Heart Disease 29 October–1 November 2001

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