

Acute rheumatic fever and rheumatic heart disease in Australia: 2018-2022

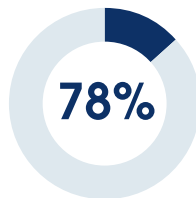
Fast facts for health professionals

There are more than **10,300 people** with ARF and RHD on Australia registers in WA, NT, SA, Qld and NSW



95% of ARF diagnoses occurred in First Nations people

78% of RHD diagnoses occurred among First Nations people



78% (or almost 8 out of 10) of First Nations Australians diagnosed with RHD did not have previous ARF recorded

In 2022, **more than 90 people** with RHD had heart valve surgery (79% were First Nations people)



26% of all ARF diagnoses were recurrences.

(recurrences are preventable)

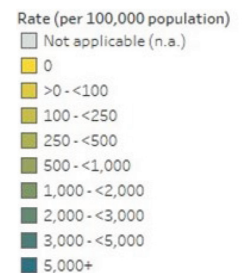
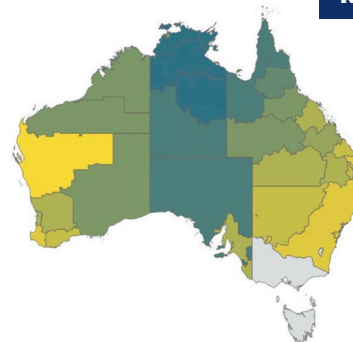


The Heart Foundation and Menzies School of Health Research acknowledge that these numbers represent people living with ARF and RHD, and that this disease impacts on individuals, families, and communities.

References

- Australian Institute of Health and Welfare. Acute rheumatic fever and rheumatic heart disease in Australia, 2022. AIHW, Australian Government 2024.
- RHD Australia. The 2020 Australian guideline for prevention, diagnosis and management of acute rheumatic fever and rheumatic heart disease (3.2 edition, March 2022); 2020.
- Stacey I, et al. Rheumatic heart disease mortality in Indigenous and non-Indigenous Australians between 2013 and 2017. *Heart*. 2023; 109(13):1025-1033.

Rates of ARF and RHD



19% of people had severe RHD at their first diagnosis

Penicillin injections to prevent recurrent ARF

14%
received
all doses

10%
received
no doses

29% of First Nations Australians living with RHD were aged under 25 years



Things you need to know

Pathogenesis

- ARF is an autoimmune inflammatory illness which develops after a bacterial Group A streptococcal (Strep A) infection. (Not everyone with a Strep A infection develops ARF)
- RHD is damage to the heart valves following ARF. The valves are left scarred which results in leaking or blockage of blood as it moves through the heart.

Global significance

- ARF is an indicator of childhood disadvantage.
- ARF is most common among children aged 5-14 years, and more common among females.
- RHD is the most common form of acquired heart disease in children and young adults.

In Australia

- ARF and RHD occur almost exclusively among First Nations peoples.
- Māori and Pacific Islander peoples also experience high rates of ARF and RHD.

Diagnosis of ARF

- Every person suspected to have ARF should be in hospital under the care of a medical specialist.
- ARF diagnosis requires a specific combination of symptoms and signs, plus evidence of a recent Strep A infection. (Strep A infection is identified from a skin or throat swab, or via a blood test)
- Symptoms and signs of ARF can include fever, red, painful, swollen joints, uncontrolled body movements (chorea), rashes, lumps under the skin, chest pain or palpitations.
- Inflammation of the heart (carditis) is diagnosed on ECG and echocardiogram.

Treatment of ARF

- For everyone: antibiotic treatment with penicillin to treat the underlying Strep A infection.
- For symptoms: medication to relieve pain and fever, supportive care for sore joints, consider corticosteroids for acute carditis, anti-epileptics for severe chorea.

Prevention of ARF

- ARF tends to recur if the person develops another Strep A infection of the throat or skin.
- Prompt antibiotic (penicillin) treatment of Strep A throat and skin infections prevents ARF.
- Intramuscular penicillin injections every 21 to 28 days during the period of high risk prevents recurrent ARF.

Diagnosis of RHD

- RHD is diagnosed on echocardiogram.
- The mitral and aortic valves are mostly affected.
- Signs of worsening RHD include breathlessness with increased activity or when lying down, tiredness, swelling of the legs and feet, and palpitations.

Disease control

- ARF and RHD are notifiable conditions in some Australian states and territories.
- RHD control programs use disease registers to help coordinate care for people with ARF and RHD.
- The Australian ARF/RHD Guideline includes recommendations and guidance to support best practice care that is clinically sound and culturally safe.
- Eliminating ARF and RHD requires ending socioeconomic disadvantage, avoiding the negative impacts of household crowding, and ensuring timely access to quality health services.
- Several Strep A vaccines are in development.

References