

# WORLD CONGRESS ON RHEUMATIC HEART DISEASE

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**Title:** ACUTE RHEUMATIC FEVER AND RHEUMATIC HEART DISEASE IN CHILDREN AND ADOLESCENTS IN VICTORIA, AUSTRALIA

**Authors:** Daniel Engelman, Daniel Lindholm, Ida Whiteman, Sarah Hope, Christian Brizard, Jane Oliver, Michael Cheung, Ari Horton, Bennett Sheridan, Myra Hardy, Joshua Osowicki, Joshua Osowicki, Andrew Steer

**Background & Aims:** A very high burden of acute rheumatic fever (ARF) and rheumatic heart disease (RHD) has been documented in northern Australia, particularly amongst Aboriginal and Torres Strait Islander peoples. However, there is a paucity of data regarding the burden of ARF and RHD in the highly populated, southern states of Australia, where the risk is assumed to be lower. These data are needed to inform clinical management and public health prevention strategies at a jurisdictional and national level. Therefore, we aimed to comprehensively describe the epidemiology and clinical profile of children and adolescents with acute rheumatic fever (ARF) and rheumatic heart

**Methods:** A retrospective evaluation was undertaken of children and adolescents with ARF and RHD attending two tertiary/quaternary paediatric referral hospitals in Victoria, Australia between 2010 and 2019. Potential cases were identified by searching electronic medical records and multiple other sources for relevant International Classification of Disease (ICD-10-AM) codes and keywords, then reviewed manually. For confirmed cases, we collected data on patient demographics, clinical features, comorbidities and management. Cases were categorised into Victorian and non-Victorian resident subpopulations for analysis.

**Results:** Of 179 participants included, there were 108 Victorian residents and 71 non-Victorian residents. 126 had at least one episode of ARF during the study period and 128 were diagnosed with RHD. In the Victorian resident group, the overall incidence of ARF was 0.8 per 100, 000 5-14 year olds. This incidence was higher in Victorian Aboriginal and/or Torres Strait Islander (3.8 per 100, 000) and Pacific Islander (32.1 per 100, 000) sub-populations. Of 83 Victorian residents who had an ARF episode, 11 (13%) had a recurrence. Most Victorian residents with RHD had mixed aortic and mitral valve pathology (69.4%) and moderate to severe disease (61.9%). Most non-Victorian residents were Aboriginal and/or Torres Strait Islander people (80.3%) and were commonly transferred for tertiary or surgical management of RHD (83.1%).

**Conclusions:** ARF and RHD continue to affect the health of significant numbers of children and adolescents living in Victoria, including severe and recurrent disease. Children from Pacific Islander, Aboriginal and/or Torres Strait Islander ethnic backgrounds appear to be at a substantially higher risk of ARF and RHD. Specialised services and a register-based control program may help to prevent complications and premature death.