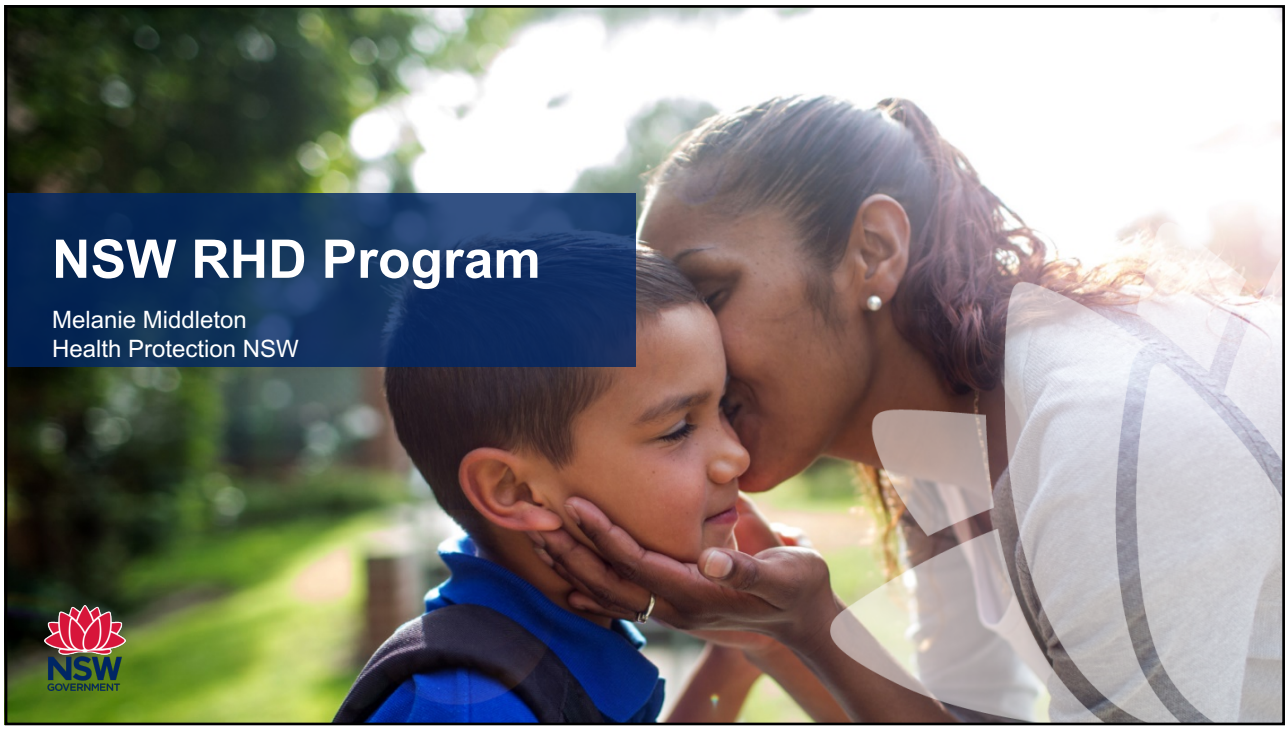
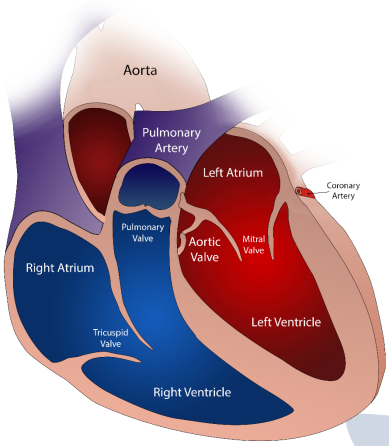


1

What are ARF and RHD?

- ARF is an autoimmune reaction to a bacterial infection with Group A Streptococcus (GAS).
- ARF most commonly begins with a sore throat
- Increasing recognition of the role skin infections play in ARF
  - Communities with high rates of ARF and RHD also have high rates of skin infections, including scabies
- It can affect the joints, heart, brain and skin.
- Inflammation of the heart from ARF can cause permanent damage, which is called RHD.
  - Primarily affects the mitral and aortic valves
- Risk of permanent damage ⇧ with each episode of ARF



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Who is affected

ARF and RHD are diseases of social disadvantage

Those at higher risk of ARF and RHD include:

- People living in communities with poor housing.
- People living with poor access to health services.
- People living in crowded conditions.
- Aboriginal and Torres Strait Islander people.
- People from migrant communities, including Maori and Pacific Islander people.
- Children aged 5 – 14 years.
- People who have had ARF in the past.

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RHD is 100% preventable

Primordial prevention

- Aim: to reduce the burden of GAS infection in communities
  - Improvements to health hardware
  - Reductions in household crowding

Primary prevention

- Aim: to prevent people with GAS infection developing ARF
  - Early treatment for sore throat in high risk populations
  - Reducing community burden of skin sores
  - Treatment within 9 days prevents ARF

Secondary prevention

- Aim: to prevent disease progression
  - Regular administration of a long acting antibiotic
  - Prevention of new episodes of ARF

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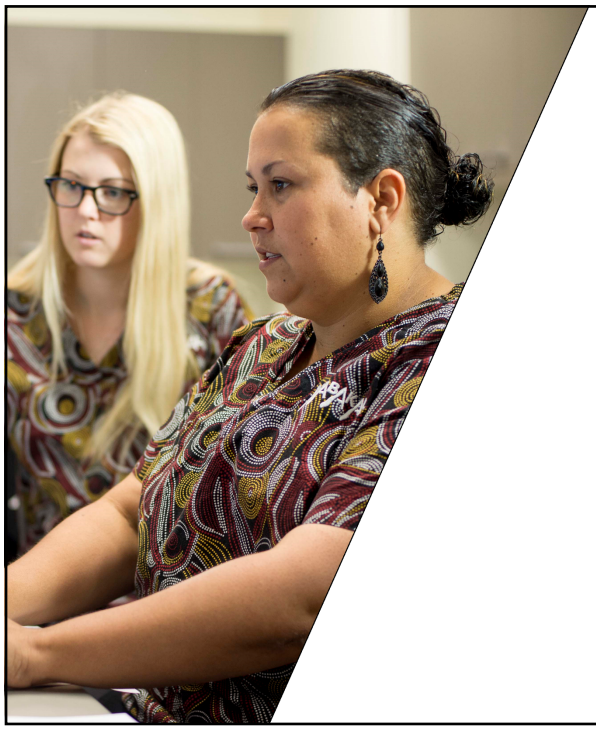

Action in NSW

- ARF/RHD became a 'notifiable condition' in NSW in October 2015.
  - RHD people aged <35 only
  - Quarterly prospective active surveillance
- NSW RHD Register became operational in NSW in May 2016.
  - Opt-in consent required
  - Purpose: to assist patients and their doctors to manage adherence to the long term penicillin prophylaxis and clinical review.
- RHD Network established in late 2015
  - Central RHD Coordinator
  - Local RHD Coordinator in each LHD
  - Public Health Units
- Education of key clinical workforce
- Environmental health pilot project

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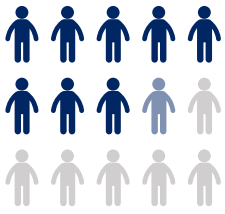
ARF and RHD diagnoses in NSW, 1 October 2015 to 30 June 2019



83 ARF notifications

137 People with ARF and/or RHD

79 RHD notifications

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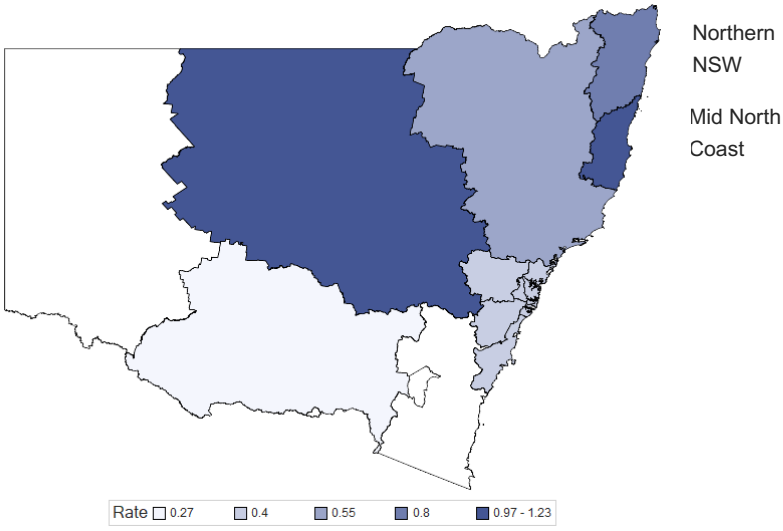
ARF/RHD in people by LHD of residence, October 2015 to June 2019



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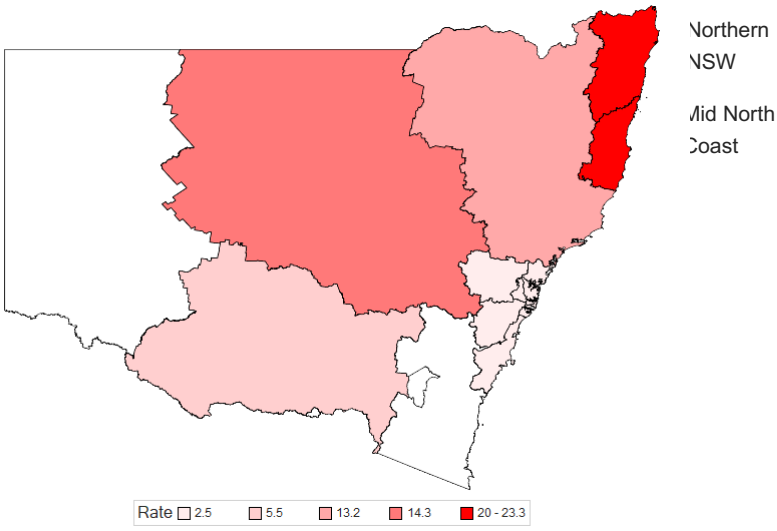
ARF/RHD in Aboriginal people by LHD of residence, October 2015 to June 2019



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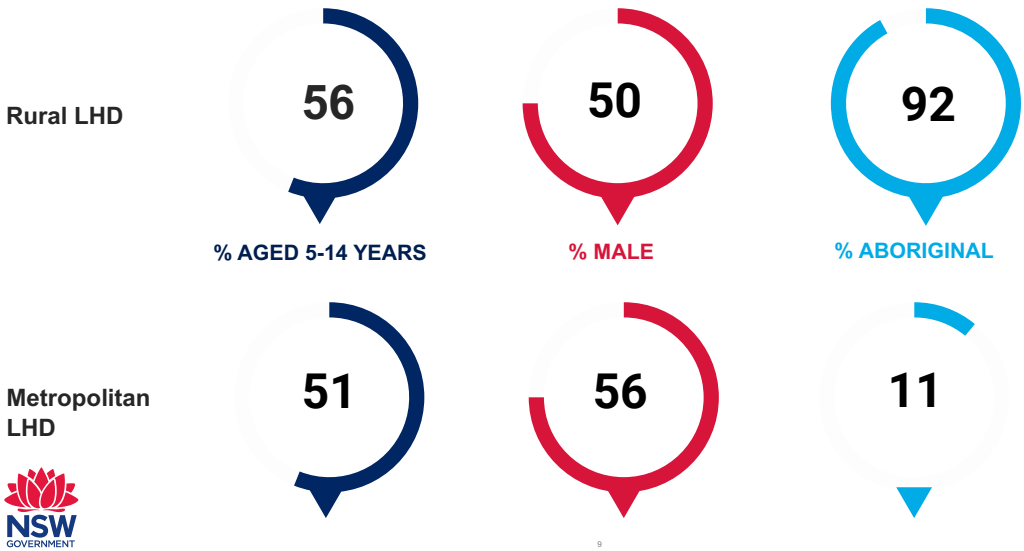
Characteristics of people with ARF/RHD in NSW in regional and metropolitan areas, October 2015 to June 2019



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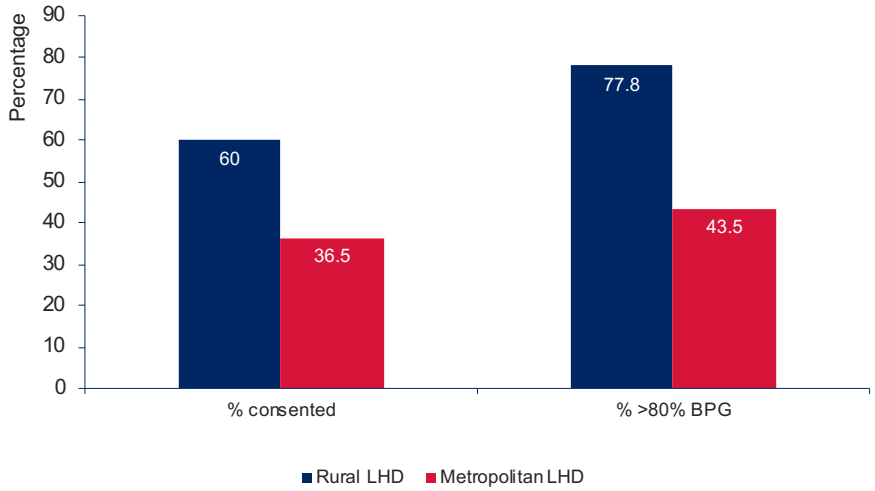
Percentage of people consented to the NSW RHD Register to the end of 2018 and completeness of secondary prophylaxis in 2018 for rural and metropolitan LHDs



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Case studies (1)

14 year old Aboriginal girl from HNE

- Diagnosed with ARF and RHD at age seven
- Family transient, attended multiple ACCHS, and missed BPG doses
- Diagnosed with recurrent ARF in 2018.
- Review of her clinical hx showed presentations for sore throat and joint pain
- RHD worsened and she is now in need of valve replacement
- Difficultly accessing paediatric cardiology

13 year old Aboriginal boy from HNE

- NSW Register contacted after he to AMS in QLD
- 2/12 earlier he had presented with joint pain and fever to a rural hospital in NSW
- He gave a history of ARF and tested positive for GAS
- He was transferred to a rural referral hospital and was diagnosed with reactive arthritis and discharged
- Review of his clinical hx found reports of previous echocardiograms and joint pain attributed to a football injury

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Case studies (2)

12 year old Aboriginal girl from Western NSW

- Lives with grandmother
- Diagnosed with ARF at age 8
- Difficulty tolerating BGP injections.
- Commenced oral prophylaxis at the age of 10
- Grandmother concerned that she will be non-adherent

22 year old Aboriginal woman from Western NSW

- Diagnosed with RHD following a recurrent episode of ARF
- Hx of opioid dependency and HCV
- At discharge the hospital arranged for her to receive BPG at their outpatient clinic
- Patient had difficulty attending the clinic due to transport issues
- LHD arranged for her to receive her BPG at the same clinic she attended for her opioid replacement therapy.

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Case studies (3)

24 year old woman from Mid North Coast

- Diagnosed with ARF at age four
- Transferred to tertiary hospital in Sydney for valve repair during pregnancy
- Successful delivery of her child
- Currently non-adherent with BPG and trying for another child

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Environmental Health pilot project

ARF and RHD are diseases of social disadvantage

- Aim: to prevent new episodes of ARF
- Method: Housing for Health survey and fix
  - consent of landlord and occupier
  - 8 houses in 3 locations
- Outcomes
  - 2 completed, 5 in progress and 1 abandoned
- Major issues identified
  - Overcrowding – particularly in relation to sleeping arrangements in hot and cold conditions
  - Plumbing issues
  - Pest control
- Challenges
  - Accessing properties, inc landlord consent
  - Limited human resources to manage the work

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Take home messages

ARF and RHD need a multi-pronged approach

Priorities for the NSW RHD Program include:

- Addressing the social determinants of health, including housing.
- Education of key clinical networks to improve:
  - ARF case identification
  - Presumptive antibiotic treatment of sore throats in high risk populations
  - Opportunistic treatment of skin infections in high risk populations
- Engagement with at risk populations to encourage health seeking behavior.
- Strengthening our relationship with the Aboriginal Community Controlled Health Sector

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Acknowledgements

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Public Health Units

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