RHEUMATIC HEART DISEASE (RHD):
NEGLECTED NCD OF POVERTY

RHD is caused by rheumatic fever (RF), an abnormal autoimmune reaction to infection with Group A Streptococcus. If left untreated, it can cause severe heart valve damage and end in stroke, congestive heart failure and death. It is the most common cardiovascular disease (CVD) in young people aged <25 years.

Although it is a reaction to a common communicable disease, RF/RHD is a chronic, non-communicable condition.

RHD makes pregnancy unsafe and kills or debilitates young people in their most productive years. Those with advanced RHD depend for survival on costly and complicated medical care that is unavailable or unaffordable for most of those who have the disease. Where provided, these services drain precious health resources needed for other health problems.

Once common in North America and Europe, by the 1980's RF/RHD had been largely eliminated there. In the 21st century the disease remains common in Africa, Middle East, Central and South Asia, the South Pacific and in pockets of poverty in other regions such as South America.

Rheumatic heart disease is a sentinel condition of poverty and of health inequality; its persistence marks the failure of our health systems to address the NCDs of the poor.

Professor Bongani Mayosi | South Africa

Box 2 | Elements of a comprehensive control programme

Primordial prevention
Improvement of environmental, social, and economic conditions of populations at risk of RF and RHD.

Primary prevention
Treatment of acute streptococcal pharyngitis (strep throat) with antibiotics to reduce the incidence of RF.

Tertiary prevention
Medical and surgical treatment of the complications of RF and RHD.

IS RHD IN YOUR NATIONAL NCD ACTION PLAN?

ENDING NEGLECT OF RHD: 25x25 < 25
The World Heart Federation 25x25 campaign calls for multi-sectoral action to reduce premature CVD mortality 25% by 2025. Within this framework, the World Heart Federation has set the goal of reducing deaths from RHD by 25% by 2025 for individuals under the age of 25 (25x25<25).

CALL TO ACTION

1. Anchor comprehensive register-based RHD control programmes in national health plans

2. Ensure universal access to benzathine penicillin G

3. Improve health-worker training on detection and management of RHD

4. Encourage development of a group A β-haemolytic streptococcal vaccine

Join our efforts to end RHD: sign up at "contact RHDnet"
www.worldheart.org/rhd

Read the World Heart Federation position statement on the prevention and control of rheumatic heart disease:
www.nature.com/nrcardio/journal/v10/n5/abs/nrcardio.2013.34.html

Box 1 | Burden of disease

15.6–19.6 million people	**suffer from RHD***
233,000–468,164 people	**die from RHD each year**
282,000 new cases	**are detected annually**

* emerging echocardiographic data suggest that the true prevalence of RHD might be several-fold higher than these figures[1]
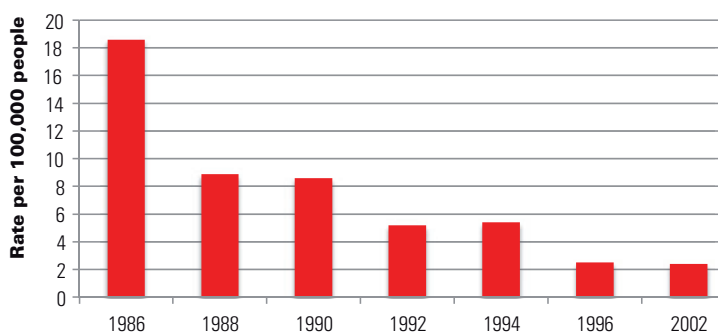
The biggest challenge in RHD control is to translate what we already know into practical RHD control.

Professor Jonathan Carapetis | Australia

RHD CONTROL | EFFECTIVE, INEXPENSIVE, OVERLOOKED
Comprehensive, register-based RHD control programmes are the most cost-effective method of RF and RHD control (Box 2), but only a handful of countries or regions within countries have adopted them. Cuba[2] and Costa Rica[3] offer examples of successful RHD control.

Incidence of rheumatic fever in 5—25 year olds in Pinar del Rio | Cuba 1986—2002

Source: Nordet 2008

ENDNOTES

1. Carapetis, J., et al., *The global burden of group A streptococcal diseases*. Lancet Infectious Diseases, 2005. 5: p. 685 - 694.

2. Nordet, P., et al., *Prevention and control of rheumatic fever and rheumatic heart disease: the Cuban experience (1986 - 1996 - 2002)*. Cardiovascular Journal of Africa, 2008. 19(3): p. 135 - 140.

3. Argueda, A. and M. Edgar, *Prevention of rheumatic fever in Costa Rica*. The Journal of Pediatrics, 1992. 121(4): p. 569 - 572.