

# 'Utter neglect' of rheumatic heart disease revealed by results from global study

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Rheumatic heart disease (RHD) - the most common acquired heart disease in children in many countries of the world - is being neglected and poorly treated, according to new findings from the Global Rheumatic Heart Disease Registry (the REMEDY study), published online today (Wednesday) in the *European Heart Journal*.

RHD accounts for up to 1.4 million deaths every year, with the highest numbers of people affected by it and dying occurring in low and middle-income countries. It is triggered by [rheumatic fever](#) (RF) that can be prevented and controlled. RF is preceded by a group A streptococcal throat infection, which can be treated with antibiotics to prevent RF developing. Regular antibiotics can also prevent RF recurring and, for those [patients](#) in whom RHD develops, they can prevent the condition from worsening. In addition, oral anti-coagulants, such as warfarin, can help to prevent stroke in patients with RHD and [atrial fibrillation](#).

However, results from the pilot phase of the REMEDY study, which looked at 3,343 RHD patients attending one of 25 hospitals in 12 African countries, India and Yemen between January 2010 and November 2012, found that:

- only 55% of RHD patients were receiving penicillin (or another antibiotic);
- oral anti-coagulants were prescribed in 70% of patients with heart problems that would benefit from it, but less than third of them were receiving the anti-coagulants at the correct therapeutic

levels and 20% of pregnant women were on warfarin despite its known damaging effects on the foetus;

- among the 1,825 women of child-bearing age, only four percent were taking contraceptive measures, despite RHD increasing the risks during pregnancy and birth - it is one of the major, non-obstetric causes of maternal death in Africa.

Professor Bongani Mayosi, Professor of Medicine and head of the Department of Medicine at Groote Schuur Hospital and University of Cape Town, South Africa, who led the research, said: "Our findings reflect the utter neglect of rheumatic [heart disease](#) in affected countries. Most of the interventions that are not applied, such as lack of penicillin use in half of the cases and a virtual absence of contraceptive use in almost all women during their reproductive period, are available and cheap in the countries concerned, and their application will provide the greatest benefit.

"For progress to be made in preventing and treating this serious condition, it is vital that these countries prioritise improving the use of penicillin prophylaxis, improving the appropriate use of oral anticoagulation therapy with warfarin, and providing contraceptive and other reproductive health services to women affected by rheumatic heart disease. At present, the primary healthcare systems are not prioritising these simple, but effective measures. Rheumatic heart disease is a disease of poverty, neglected by the health ministries in affected countries and by the international community in general."

RF affects the heart, joints and central nervous system. Left untreated, it can cause scarring (fibrosis) of the heart valves, leading to crippling valvular heart disease, heart failure and death. Patients with RHD also suffer from complications related to atrial fibrillation (irregular heart beat). Overcrowding, poor housing conditions, under-nutrition and poor access to healthcare facilities play a role in RF's persistence, particularly

in developing countries.

The REMEDY study found that the majority of patients with RHD were young (median age of 28), predominantly female (66%) and unemployed (75%). The majority (64%) had moderate to severe disease of the heart valves, further complicated by congestive heart failure (33%), pulmonary hypertension (29%), atrial fibrillation (22%), stroke (7%), infective endocarditis (inflammation of the inner tissues of the heart) (4%) and major bleeding (3%). Patients living in low- and lower-middle income countries [2] were less likely to have had effective surgical procedures carried out, such as heart valve replacement or repair, compared to patients in upper-middle income countries, despite the greater prevalence of patients with RHD and left ventricular dysfunction who required these procedures in the low-income countries.

Co-author, Professor Salim Yusuf, Professor of Medicine and McMaster University Executive Director, at the Population Health Research Institute, McMaster University, Canada, and incoming President of the World Heart Federation, said: "The World Health Organization has called upon countries of the world to reduce mortality associated with rheumatic heart disease and other non-communicable diseases by 25% by the year 2025 - known as the 25x25 target. The findings of this study not only set the baseline by which to judge progress, but also point to the need to close the gap in the use of evidence-based interventions if the 25x25 target will be achieved for rheumatic heart disease."

Prof Mayosi concluded: "We plan to launch the full study of 30,000 patients with rheumatic heart disease from 166 endemic countries from 2015 onwards. The full REMEDY study, which will involve contributors from all inhabited continents of the world, will serve as a platform not only for monitoring progress to the achievement of the 25x25 target, but also for trialling new and novel strategies, such as new oral anti-coagulants, for reducing morbidity and mortality in rheumatic heart

disease. REMEDY seeks to put an end to [rheumatic heart disease](#) in our own lifetime through the application of preventive measures."

**More information:** "Characteristics, complications, and gaps in evidence-based interventions in rheumatic heart disease: the Global Rheumatic Heart Disease Registry (the Remedy study)", by Liesl Zühlke et al. *European Heart Journal*. [DOI: 10.1093/eurheartj/ehu449](https://doi.org/10.1093/eurheartj/ehu449)

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