

Screening programs detect cases of undiagnosed rheumatic heart disease in low-resource countries

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Widespread screening of children in poorer countries is now being studied and is resulting in the diagnosis of rheumatic heart disease (RHD) in patients that would likely have gone undetected under normal circumstances, according to two new studies carried out in Fiji and Uganda presented today at the World Congress of Cardiology.

Coordinated screening and control programmes can help to identify patients before they progress to severe RHD for a fraction of the cost associated with treating these patients. While more work needs to be done to determine if these programmes should be widely promoted, there has been limited evidence to suggest that they are feasible in countries that have few resources - until now.

In one study carried out in Uganda, 4,869 school children were screened simply using a stethoscope and a portable echocardiography machine. Of the children screened, 72 (1.5 per cent) were diagnosed with possible, probably or definite RHD that required follow-up.

"This is one of the largest single-country child echo-based RHD screening studies that has been carried out," said Dr. Andrea Beaton Children's National Medical Center, USA. "This study proves that even in low-resource settings it is possible to embark on a screening programme that will identify children with probable or definite RHD, that would otherwise not have been seen until they had progressed to severe disease."

Meanwhile, in [Fiji](#), a similar screening programme sought to estimate the prevalence of RHD in primary school-aged children using echocardiography and to determine if nurses could be trained to use a RHD echocardiography screening protocol in a resource-poor setting.

Through the programme it was found that 2.7 per cent of the screened population had RHD. The study also demonstrated that nurses could be trained to carry out the screening programmes and identify RHD cases that required follow-up.

"The results of these studies show that it is possible to carry out RHD screening programmes that identify at-risk patients early," said Professor Jonathan Carapetis, Director of the Menzies School of Health Research in Darwin, Australia. "Given the financial burden of treating severe RHD patients and the total number of people developing the disease around the world, it is imperative that we determine if implementing these types of programmes will save lives, reduce the high financial burden of the disease and be cost-effective."

About RHD

RHD is a chronic heart condition caused by rheumatic fever that can be prevented and controlled. Rheumatic fever is caused by a preceding group A streptococcal (strep) throat infection. Treating strep throat with antibiotics can prevent rheumatic fever. Moreover, regular antibiotics (usually by injections every three to four weeks) can prevent patients with [rheumatic fever](#) from contracting further strep infections and causing progression of valve damage.

RHD is a substantial global health problem that can result in irreversible heart damage and death. It occurs predominately in developing countries and is also common in poorer populations in middle-income countries (e.g. Brazil, India) and some indigenous populations in wealthy countries (Australia, New Zealand). RHD will continue to be a global problem unless current prevention initiatives are expanded and sustained.

Previous estimates state that more than 15 million people have RHD and that 350,000 people die each year while many more are left disabled.

Provided by World Heart Federation

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