

WORLD CONGRESS ON RHEUMATIC HEART DISEASE

2-4 November 2023 • Abu Dhabi



Submission Id: 47

Title: Prevention of Rheumatic Heart Diseases in Zambia

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Background & Aims: Rheumatic heart disease (RHD) is a major problem in developing countries like Zambia, and is the cause of most of the cardiovascular mortality in young people. Acute rheumatic fever, the precursor to rheumatic heart disease, can affect various organs and lead to irreversible valve damage and heart failure. Treatment guidelines have emphasized antibiotic prophylaxis against recurrent episodes of acute rheumatic fever. Seeking of early medical attention including Diagnostic and Treatment services are possible preventive measures if people at risk for RHD in endemic communities are screened. Echocardiographic screening has played a key role in improving the accuracy of diagnosing RHD and has highlighted the disease burden

Methods: The study analysis is evaluating interventions through estimating their impact, the determinants of Rheumatic Heart Diseases, and through assessing efficient resource allocation of Rheumatic Heart Diseases resources. A mixed methods approach is being used that applies both quantitative and qualitative analysis of RHD data and interventions in Zambia. The impact of RHD interventions on mortality and morbidity in Zambia impact is assessed using the Lives Saved (LiST) tool. The analysis is being conducted at the district level so that changes at this level can be estimated.

The second analysis is to identify and measure the main drivers of RHD in Zambia. The determinants are assessed through conducting an Oaxaca Blinder counterfactual decomposition analysis to assess how factors that have affected RHD have changed over time in Zambia.

The third analysis is an allocative efficiency analysis. This analysis assesses the optimal allocation of resources to maximize the RHD impact as well as financing needs for the RHD Health promotion and preventive targets. The Optima tool uses demographic and health data (HMIS), data on the coverage of the program, and the cost per person reached as well as data on effectiveness of interventions to model the impact of interventions.

Results: The study findings will be available in June/July 2023.

The study will present lives saved and cases of RHD averted by Health promotion Activities, district by interventions included in the LiST tool. Comparisons across districts and interventions will show which aspects of RHD/ Cardiac Prevention programs have been most impactful.

The study will present the relative contributions of key factors to RHD in Zambia over time from the Oaxaca Blinder decomposition analysis. These results will provide useful context for understanding the impact of the preventive and control interventions.

From the allocative efficiency study, findings will show how resources should be allocated across RHD and cardiac related interventions and by geographic region to minimize RHDs. The results will show the cost per person for Rheumatic Heart Diseases cases averted by nutrition interventions and, through optimization, suggest resource allocations that will minimize RHD.

Conclusions: The study will present lives saved and cases of RHD averted by Health promotion Activities, district by interventions included in the LiST tool. Comparisons across districts and interventions will show which aspects of RHD/ Cardiac Prevention programs have been most impactful.

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