

WORLD CONGRESS ON RHEUMATIC HEART DISEASE

2-4 November 2023 • Abu Dhabi



Submission Id: 182

Title: INTEGRATING ECHO SCREENING INTO THE SCHOOL HEALTH NURSE VISITS IN PRIMARY SCHOOLS IN FIJI ISLANDS

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Background & Aims: Fiji has one of the highest burden of rheumatic heart disease (RHD) in the Pacific, yet many remain undetected in communities. Late diagnosis and initiation of secondary bacterial prophylaxis (SPB) contribute to the increased mortality in young people. Since 2014, Cure Kids has been supporting RHD-related programme in partnership with Fiji's Ministry of Health (MOH). The burden posed required addressing and developing a fresh approach to increase the coverage for screening through task shifting from echocardiogram trained experts to briefly trained nurses. In 2016 the MOH recommended that the long-standing school nurse auscultation for RHD evolve to an echo-based screening programme.

Methods: Accessing children through schools is an ideal population-based screening approach as school attendance is high and there is an established school health programme by MOH.

In 2017 four school nurses in the Suva region were trained to use portable handheld ultrasound as the initial screening tool for RHD and the programme was rolled out in 2018. However due to COVID-19 and turnover of staff, this has been put on hold.

Referral pathways were developed for a cardiac sonographer to review suspected cases from school screening using a Vivid IQ Echocardiogram machine and save images for confirmation by paediatrician. The Labasa pathway excludes the sonographer review step. Learning and trials from this pilot rollout played a role in the planning and expansion of the programme conducted for Rewa and Labasa region in 2022 and 2023 respectively. This trained an additional 10 nurses.

Results: The school health screening teams in the Rewa and Labasa region screened Year 6 level entrants during routine school visits. Visiting schools with smaller rolls the team was able to also screen additional years and in some cases, the whole primary school.

To date, of the 1262 primary school students in the Rewa and 517 in the Labasa region, 907 and 425 respectively were screened by the trained school health nurses.

The Rewa team found 118 students to have an abnormal screening and referred for review by cardiac sonographer. The sonographer has reviewed 101 of these children and tagged 22 for confirmation by paediatrician however the paediatrician assesses all images reviewed by the sonographer therefore of the 101 saved images, there were 25 newly diagnosed Definite RHD and 7 borderline RHD cases detected.

The Labasa team found 33 students with an abnormal screening of which 19 have had a confirmatory echo by paediatrician with 10 Definite RHD cases detected.

The positivity rate for RHD in school students in the 2 region is 1.8% for definite RHD and 2.4% for definite and borderline RHD.

Conclusions: Sustainability of the echocardiogram school screening includes enterprise to retain nurses, linkage to continuum of care for diagnosed cases, and contingency planning for program adjustment to cater for conflicting programs with national priority. COVID-19 pandemic also negatively impacted adherence to SBP for those diagnosed from screening. The programme worked with teams from primary healthcare in tracing defaulters and restarting treatment through a targeted vaccination campaign during this period.

Nonetheless there has been successes and enablers in the programme including early detection, development of referral pathway to primary and tertiary care and involvement of civil society organisation for peer support group.