



NZ Charitable Trust Number: CC52875
Email: info@hearts4kids.org.nz

Postal Address: 15 Eastbourne Road, Remuera 1050
Website: www.hearts4kids.org.nz

Our vision is to extend lifesaving cardiac care to children born in our neighbouring countries of the Pacific.

**Hearts4Kids Paediatric Cardiac Surgical Mission Report
19 - 30 July 2025
at Sri Sathya Sai Sanjeevani Children's Hospital
Suva, Fiji**

Introduction

Hearts4Kids Trust is a non-profit volunteer organization whose aim is to treat children with congenital and rheumatic heart disease, in Fiji. Since 2023 we have operated at the newly-built Sanjeevani Children's Hospital in Suva. Access to surgery for children living in the Pacific Islands is limited for geographic and economic reasons. This year, for the first time, we organized two missions – for July and October, and invited Australian medical volunteers to join our New Zealand team. This was the eighth visit by Hearts4Kids to Fiji since 2014.

Collaboration with Pasifika Medical Association Group

Pasifika Medical Association Group (PMA) is a non-government organisation partially funded by the Ministry of Foreign Affairs and Trade with a mandate to support health and educational initiatives in the Pacific Islands. Bringing heart children from other Pacific Islands to Fiji for surgery would not be possible without the networking and logistical support of the PMA group whose Pasifika staff have close connections with the medical personnel and authorities in these neighbouring countries. We are also very grateful for their financial support.

Patient Referrals

From early 2025, cardiologists from the Starship Hospital doing visiting clinics to Vanuatu, Western Samoa and Tonga, created lists of children requiring surgery and presented the data to Kirsten Finucane. Appropriate cases were selected and then referred to the PMA group to manage the logistics of getting them to Fiji. For the first time, a list of Tongan children and teenagers was included. Other children in Fiji were also detected by local surveillance nurses and doctors and referred through Sanjeevani Hospital at a Zoom meeting on 19th June 2025.

Preparation of supplies

In January 2025 Hearts4Kids made requests for medical equipment and supplies by donation, discounted pricing or purchase. We are very appreciative of the companies which responded so generously and to Medical Aid Abroad for their support. This year we needed to purchase more supplies than we have previously, as well as catering for two missions. Equipment and supplies were itemized, boxed, packed on pallets, and made ready for shipping to Fiji. A 20' container (value NZ\$45,000) left the warehouse on 23rd June and arrived at Sanjeevani Hospital on 9th July 2025. We were donated a set of valve repair rings and tissue aortic valves from the Tongan Ministry of Health, previously acquired for an Open Heart International mission, for which we were very grateful. Namrata, with her knowledge of Fiji Customs requirements and documentation, was extremely helpful as these supplies were brought into Suva.

Medical Personnel

In October 2024 we commenced the process for selecting medical personnel, from NZ and Australia, for two missions. This was done to spread the workload across more than one Paediatric Cardiac service, thus allowing more visits per year and improving the sustainability of future missions. However, it also increased the administrative responsibilities and fundraising requirements for our small committee accordingly. The July team, as per table below, included a second surgeon, Dr Matt Liava'a from Westmead Hospital in Sydney. Team members, 28 from New Zealand and 7 from Australia, took annual leave to contribute to the mission and worked long hours side-by-side together.

Hearts4Kids Paediatric Cardiac Surgical Team

Designation	Numbers
Paediatric Cardiac Surgeon	2
Paediatric Cardiologist	1
Anaesthetist	2
Intensivists	2
Perfusionist	2
Anaesthetic Technicians	2
Theatre Nurses	3
PICU Team Leader and Nurses	10
Ward Team Leader and Nurses	8
Clinic Nurse – Admissions/Pre-op/Discharge	1
Mission Coordinator	1
Database Specialist & Cardiac Physiologist	1
Total	35

Pre-operative Phase

Patients from Samoa, Tonga and Vanuatu arrived one week early and were promptly reviewed by Paediatrician Dr Maryanne Kora'ai, so that any skin or respiratory issues could be treated before surgery. One infant who arrived from Vanuatu sadly required immediate admission to CWM Hospital due to significant respiratory distress and remained too unwell to have her cardiac operation.

Triage Clinic - Saturday 19th and Sunday 20th July 2025

Dr Kirsten Finucane, Paediatric Cardiac Surgeon and Dr Natalie Soszyn, Cardiologist, reviewed data on 18 patients with Dr Kora'ai and selected 14 patients for repair. Other children were in a position to wait for later surgical visits. There was one late addition, the boy from Kiribati, who was added during the week, to make a total of 15. Theatre and PICU team members arrived in Fiji on Saturday.

Set-up Day - Sunday, 20th July 2025

The team at Sanjeevani Hospital had unpacked the supplies from the container and the Hearts4Kids team then unpacked all the boxes and set-up the clinical areas ready for operating to start early Monday morning. Some supplies were set aside for the October mission.

Operating days and Early Post-operative Phase - 21st – 25th July 2025

There were five operating days working from 0700hrs to 2200hrs. PICU opened with three beds, increasing to six for Tuesday. In the operating room we had assistance from Dr Terence Fong, a Fijian anaesthetic consultant interested in cardiac care, who performed many of the central and arterial line insertions in preparation for bypass and assisted the cardiac anaesthetics throughout the case. We also had the help of Dr Sundar, a Registrar training in General Surgery who scrubbed and assisted for most of the cases. Both these Fijian doctors are keen on joining us again in October. The Fijian scrub nurse, Vara, did a great job scrubbing for the non-bypass and one of the redo bypass cases, with coaching from Helen Sargent.

There were 9 males and 6 females, aged from 6 months to 19 years, weights 6.5 kg to 92 kg. This mission we successfully repaired five rheumatic valves in four patients. We also did two redo procedures after prior Tetralogy repair on a 16 and 19 yr old after obtaining CT scan imaging in Suva which gave us excellent data to allow safe re-entry. We had 6 teenagers this time, all boys, from Tonga, Fiji and Kiribati, who became good friends preoperatively at the motel and then supported each other in hospital during their recovery, which was a pleasure to witness.

Domiciles of Patients

Country	Number
Fiji	3
Western Samoa	3
Vanuatu	2
Tonga	6
Kiribati	1
Total	15

Summary of Procedures

Bypass procedures	Number
Mitral valve repair (rheumatic)	3
Mitral valve and Aortic valve repair (rheumatic)	1
Sub Aortic VSD with Aortic valve repair	3
Pulmonary valve insertion/conduit replacement (redo)	2
Simple Ventricular septal defects	3
Primum Atrial septal defect – severe left AV regurgitation	1
Non-Bypass	
Patent ductus division	1
Coarctation repair via thoracotomy	1
Total	15
Non -Cardiac	
Sternal wire removal	1

Post-operative Phase

In PICU Drs Monica Brook and Cedric Sotas coached two Intensive Care Registrars alongside the patients as they tracked through. All patients were extubated successfully within 2-6 hours post-op.

The stepdown ward opened Wednesday 15th July and ran until Tuesday 21st July, with Fijian staff from Sanjeevani Hospital rostered every day alongside NZ staff, and Fijian staff by Monday night (20th July). The final four patients were discharged on Tuesday morning. During this time there were junior doctors loaned to us from the CWM Hospital in Suva, who were trained to lead the Ward Rounds every day and to provide excellent overnight cover.

One teenager, discharged post-op Day 4, developed a pleuritic chest pain at the motel with sweating and some respiratory distress and was promptly brought back to Sanjeevani Hospital for a checkup. He was diagnosed with pericarditis, readmitted and treated with anti-inflammatory medication that settled him nicely over 48 hours.

A second child of 10 years old developed a large pericardial effusion on Day 6 post-op which did not respond to diuretics and anti-inflammatory drugs. Dr Kora'ai had been in communication with me after seeing her daily at clinic. She was taken to CWM hospital by Dr Kora'ai and underwent a localized drainage and drain insertion under anaesthesia. This was reassuringly performed with excellent results by Dr Sundar and Dr Fong after detailed communication with our team, and she was discharged after three days as the drainage settled and has made a full recovery.

Clinics were held from Monday 20th doing post-op check-ups, run by Rhamalla - Fijian Charge Nurse. Ongoing clinics by Dr Maryanne Kora'ai continued over the following two weeks ensuring all the children made a full recovery before planning their transfer back to their Pacific home country.

Quality Initiatives

Teaching and Education: The PICU staff spent much of the first day teaching clinical care to all seven of the Fijian nurses (from Sanjeevani, CWM and Lambasa hospitals) who were to be involved in cardiac care. Drain removals, central line removals and other nursing tasks were managed well by the local nurses, who showed good progress in knowledge and experience since the 2024 visit.

The stepdown ward staff worked collaboratively with seven Pacific nurses in a shared care model. Education was undertaken at the bedside throughout the week. The local nurses received education and mentoring in the following areas: 1) Monitoring the post-op cardiac patient, 2) Signs and symptoms of a deteriorating patient, 3) CVL Removal, 4) Pacing wire removal and monitoring, 5) Arrhythmias, 6) Congenital heart disease, 7) Discharge education following cardiac surgery, 8) Surgical Pathways, 9) Wound care, as well as general nursing education. The Pacific nurses grew in confidence and skill significantly throughout the week which was a delight to see.

Chris Orchard has been training nurses in the pre-operative preparation of the patients and has now said this responsibility can be transferred to the Sanjeevani Hospital nursing staff from October. They have shown excellent progress in understanding the requirements. However, we have suggested

some support from an allocated PICU nurse, and from theatre technical staff, so that things run smoothly, especially for the giving of pre-medications, which require two people to check doses.

Audit: Sue Brett recorded all operations electronically and assisted the local interns with the writing of electronic discharge summaries. An electronic format created by the hospital is making this more straightforward and usable by all teams. The plan is for Dr Kora'ai to enter these patients on the World Database. The larger goal is for Sanjeevani Hospital to enter all teams' data as the year goes on. We are working to obtain more long-term follow-up data and putting in place a process to track and document patient progress, at least at one-year post-operation, which would provide valuable feedback on our patient selection.

Debrief: Theatre debrief held Saturday 26th with representation from the PMA group, Sanjeevani staff and with Heart4kids team leaders. Minutes taken.

Sustainability: Many of our staff have commented on the improvements seen and experienced in the functioning of the Sanjeevani Hospital. The Pharmacy and consumables supplies were very good, with a much smaller number of items needing to be brought in the container. The facilities are running more smoothly and with more efficiency, and there is increasing confidence that the theatre and ward systems are more robust and well supported. We would like to congratulate Dr Krupali and her team on this remarkable progress we have seen in just three years since opening.

Conclusion

This was the eighth visit to Fiji since 2014 and the Hearts4Kids Paediatric Cardiac Surgical team has now performed successful heart surgery on 121 babies, children and young adults with congenital or rheumatic heart defects, including Tongan children for the first time.

Acknowledgements

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**Our grateful thanks to ALL our sponsors, for donations large and small,
for supporting the 2025 Hearts4Kids Missions to Fiji – we couldn't do this without you!**

Kirsten Finucane
Chair, Hearts4Kids Trust