



# Heart to Heart Global Cardiac Care

SITE: SAN JUAN DE DIOS HOSPITAL  
LOCATION: SAN JOSE, COSTA RICA  
COLLABORATION LAUNCHED: 2023

*Measurably Expanding Access Since 1989*

SEPTEMBER 16–24, 2023  
CARDIAC TRAINING MISSION 1  
PATIENT STORY



## HOUSEHOLD AND FAMILY

Carlos is a 66-year-old farmer from Coto Brus, Costa Rica. He owns a small piece of land near the Panamanian border, laboring every day in the fields to raise corn, beans, squash, and other crops.

Carlos has a daughter and two sons, as well as two stepchildren. He was proud to tell us about their careers, especially since he did not have the opportunity to attend school when he was young. As an adult, Carlos earned his elementary school diploma.

## MEDICAL HISTORY

About eight months before Heart to Heart's first mission to the San Juan de Dios Hospital (HSJD), Carlos was tending to his crops and carrying a heavy load, when he felt himself run out of breath. He stopped for a moment and leaned over to catch his breath, but felt no relief. Beginning to feel dizzy, Carlos dropped what he was holding, then fell to the ground. Unable to lift himself back up, he remained alone sitting in the field as rain began to pour down. A long while later, he was able to get back up and walk home.

After this frightening experience, Carlos and his wife went to their local hospital, several hours from Costa Rica's capital, San Jose. There, he remained under observation for a few days. Doctors monitored his breathing and pulse as well as other vital signs. They soon discovered signs of heart disease and transferred Carlos to HSJD in San Jose where he was diagnosed with aortic valve stenosis and was told he would need heart surgery.

## TREATMENT AND FOLLOW-UP CARE

At the beginning of Heart to Heart's mission, Carlos's case was presented for teamwide discussion. Our joint team reviewed images of his heart's anatomy and physiology and determined that he was a good candidate for a minimally invasive aortic valve replacement. For patients needing valve repair or replacement, the position and angle of the aortic or mitral valve vis-à-vis the site of the incision dictate whether a minimally invasive approach is a safe and technically feasible option. Although more technically demanding for surgeons than a full sternotomy, this approach offers the patient the likelihood of less trauma to the chest; reduced risk of postoperative infection; and an easier recovery in the ICU and thereafter.

On September 20, 2023, Carlos underwent aortic valve replacement via a right anterior minithoracotomy—a small, lateral incision on the right side of his chest—the first such procedure ever performed in Costa Rica. Fortunately, Carlos's surgery went well and he was discharged from the ICU just two days later.

Without treatment, Carlos's quality of life would have continued to deteriorate and it is unlikely that he would have reached his 70th birthday. Thanks to his new bioprosthetic valve, Carlos can comfortably resume his active lifestyle—and look forward to a normal life expectancy.

## PATIENT PROFILE

Name	Carlos A.
Age	66 years old
DOB	May 4, 1957
Home	Coto Brus, Costa Rica
Diagnosis	Aortic valve stenosis
Open heart surgery	Aortic valve replacement via right anterior minithoracotomy with bioprosthetic valve
Date of procedure	September 20, 2023
Discharged from ICU	September 22, 2023

*Based on an interview conducted in Spanish by Lucie Everett, Heart to Heart staff.*