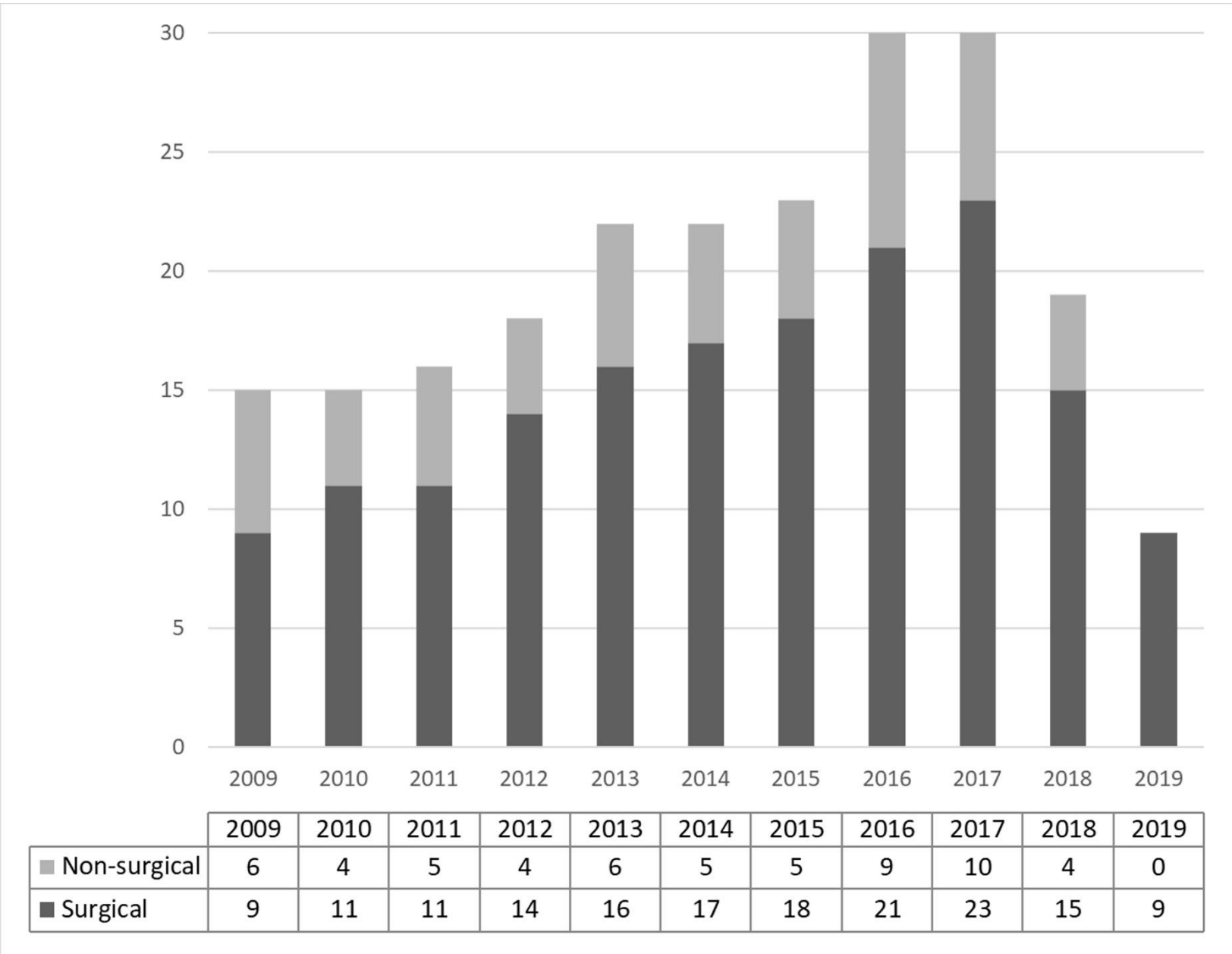


Clinical Outcomes and Cost Analysis of Cardiac Interventions for Patients Referred from a Lower-Middle Income Country: A 10-Year Experience



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Background: Cardiovascular disease is a major cause of life loss, yet access to treatment is limited in developing countries. This study evaluated short-and mid-term outcomes and the costs associated with referring Kiribati patients to Taiwan for cardiac interventions.

Methods: Medical records of 147 patients with potentially interventionable cardiovascular diseases referred to Taiwan between January 2009 and September 2019 were analyzed. A cross-sectional follow-up in Kiribati was conducted in 2018 to 2019, and the results were also reviewed.

Results: Among the 147 patients, 112 patients underwent cardiac surgeries, including 16 coronary artery bypasses, 64 mitral valve replacements, 30 aortic valve replacements, and 26 congenital heart surgeries. The hospital mortality was 2.3% for non-congenital heart surgeries and 7.7% for congenital heart surgeries. The median hospital cost was US \$19,105.9 for congenital heart surgeries, and US \$17,168.3 for non-congenital heart surgeries. The median follow-up was 33.9 months for the 83% patients that could be located, with one additional mortality identified.

Conclusion: Transferring patients from lower-income countries to countries with established infrastructure has demonstrated positive short-term and mid-term outcomes but could be less cost-effective and should be considered as a transitional measure.

*COST (USD)	CARDIAC SURGERY (112)	NON-CARDIAC SURGERY (35)	P-VALUE
OPERATIVE COST			
Non-congenital heart surgery	4320.1 (1418.6)		
Congenital heart surgery	3974.2 (908.5)		
HOSPITAL COST	17756.9 (8481.4)	6700.4 (7860.6)	0.00
Non-congenital heart diseases	17168.3 (7826.6)		
Congenital heart diseases	19105.9 (9482.0)		
Average per person per day	927.3 (427.4)	506.9 (902.6)	0.00
EXTRA-HOSPITAL COST	2733.3 (366.7)	2700.0 (366.7)	0.83
TOTAL COST	23221.2 (8861.6)	9256.7 (4527.7)	0.00
Non-congenital heart surgery	20030.9 (7214.0)		
Congenital heart surgery	21539.3 (9482.0)		

