Making the Transition from Surgical Missions to Autonomous Cardiac Surgery in Nigeria: Lessons Learned and Outstanding Challenges

Objective: To describe the progression from a Surgical Mission Model to a Resident Team Model conducting Cardiac Surgery at a University Hospital in Lagos, Nigeria, the most populous country on the African continent. We describe the lessons learned and the outstanding challenges to be overcome.

Methods: This study is a retrospective analysis of prospectively maintained data from the Lagos State University Teaching Hospital (LASUTH) Cardiothoracic Surgery database between November 2004 and July 2021. Data extracted included patient demographics, logistic EuroSCORE, operation, lead surgeon and outcomes.

Results: Over the study period, 96 operations were completed, with an average age of 35 +/- 16 years and average EuroSCORE of 1.4 +/- 1.2. Between 2004 – 2011 (Surgical Mission Period), 51 operations were completed with an average age of 28.9 +/- 15.6 years and average EuroSCORE of 1.0 +/- 0.4. The Resident Team performed 25.5% of the operations (13/51). Between 2017 – 2021 (Transition Period), 45 operations were done with an average age of 40.8 +/- 13.8 years and average EuroSCORE of 1.9 +/- 1.4. The Resident Team performed 84.4% of the operations done in the Transition Period (38/45). Overall mortality during the study period was 13.5%(13/96), dropping from 17.6% in the Surgical Mission Period (9/51) to 8.9% in the Transition Period (4/45).

Conclusion: Our institution has made a successful transition from the Surgical Mission model to a resident cardiac surgical team that functions autonomously, with a gradual increase in surgical volumes and a reduction in mortality. To build sustainability, our focus has been on limiting activity to adult surgery, utilizing risk stratification to limit higher risk operations, and building reliable supply chains and a revenue-generating structure to reduce dependence on Surgical Missions. Provision of appropriate infrastructure and equipment, investment in training of the resident team and continued humanitarian international collaboration focused on skill transfer have been key to this successful transition. Financial support for the program and increasing surgical volumes are outstanding challenges.

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