AP008

Paediatric Cardiology & Congenital Heart Disease • Poster Presentation

ESTABLISHING A CARDIAC ELECTROPHYSIOLOGY LABORATORY IN LOW AND MIDDLE-INCOME COUNTRIES AT A GOVERNMENT HOSPITAL (LAGOS STATE UNIVERSITY TEACHING HOSPITAL [LASUTH]) SETTING: CHALLENGES, EARLY OUTCOMES, AND FUTURE DIRECTIONS

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Background: Cardiac electrophysiology (EP) is essential for the diagnosis and treatment of complex cardiac arrhythmias, yet access remains limited in many low and middle-income countries due to inadequate infrastructure, limited funding, and shortages of trained personnel. This study describes the establishment of a dedicated EP laboratory in a low and middle-income setting, highlighting the implementation process, challenges encountered, and early clinical outcomes.

Methodology: A retrospective descriptive review was conducted on the planning, establishment, and initial operation of a newly developed cardiac EP laboratory within a tertiary cardiovascular centre. Information on infrastructure development, equipment acquisition, workforce training, procedural implementation, and operational challenges was reviewed.

Results: The establishment of the EP laboratory enabled the introduction of diagnostic electrophysiological studies, catheter ablation, permanent pacemaker implantation, implantable cardioverter-defibrillator (ICD) implantation, and cardiac resynchronization therapy (CRT). The programme improved access to specialized arrhythmia care while reducing the need for overseas referrals. Key challenges included high equipment costs, limited funding, inconsistent supply of consumables, and shortages of skilled personnel. These barriers were addressed through institutional commitment, multidisciplinary collaboration, targeted capacity building, and partnerships with international organizations.

Conclusions: Establishing a cardiac EP laboratory in a low and middle-income environment is feasible with strategic planning, institutional support, and collaborative partnerships. Sustained investment in workforce development, infrastructure, and financing is essential to expand equitable access to advanced cardiac rhythm management services in low and middle-income countries.

Keywords: Cardiac Electrophysiology, Electrophysiology Laboratory, Catheter Ablation, Arrhythmia Management, Low and middle-income Countries , Capacity Building, Cardiovascular Technology, Healthcare Infrastructure, Developing Countries.