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## Clinical epidemiology of congenital heart disease in Nigerian children, 2012-2017.

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### Abstract

**BACKGROUND:** Congenital heart diseases (CHDs) affect ~1% of newborns and are a significant cause of morbidity and mortality in children. We present the clinical epidemiology of CHD as seen in a large university medical center in Nigeria.

**METHODS:** Participants were 767 children with echocardiographically confirmed CHD seen over a 5-year period at the Lagos University Teaching Hospital, Nigeria.

**RESULTS:** Clinical presentation was often late with just over half (58.1%) presenting in infancy. The male:female distribution was 1:1. The predominant types of cardiac lesion seen were septal defects (43%), conotruncal defects (23.7%), atrioventricular septal defects (9.8%), and right ventricular outflow tract obstruction (7.3%). Cyanotic CHD was seen in 28.4% of cases and the single most common cyanotic CHD was Tetralogy of Fallot (13.4%). Children with cyanotic CHD were older ( $p = .002$ ), had more severe lesions ( $p < .0001$ ) and were more likely to have cardiac intervention ( $p < .0001$ ). Extracardiac malformations were present in nearly one-third of the children. Syndromes associated with CHD were identified in 15.5% of the children and included Down syndrome (11.9%), congenital rubella syndrome (1.0%), and Marfan syndrome (0.7%).

**CONCLUSIONS:** This study is a large case series of CHD from a single site in sub-Saharan Africa utilizing clinical, epidemiological, and developmental considerations. It provides a rich and up-to-date description of the clinical epidemiology of CHD in Nigerian children while yielding data that could be useful for designing genetic, molecular, and biomarker studies.

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**KEYWORDS:** clinical epidemiology; congenital heart disease; etiology; syndromes

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