



Mobile Health Clinics' Impact on Tuberculosis Patient Outcomes in Urban Nigerian Slums: An Interrupted Time Series Analysis

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Abstract

Urban Nigerian slums face significant challenges in accessing healthcare services. Mobile Health Clinics (MHCs) have emerged as a potential solution to improve tuberculosis (TB) patient outcomes. An interrupted time series design was employed to assess changes in TB case notifications and treatment completion rates before and after MHC interventions. Data were collected from health records over a two-year period. MHCs led to an increase of 15% (95% CI: 4-26%) in the proportion of patients completing their full course of TB treatment, indicating enhanced patient engagement and adherence. The use of MHCs for outpatient TB services demonstrates potential in improving TB outcomes in urban slum settings. Further research is recommended to explore scalability and sustainability. Health authorities should consider expanding the role of MHCs in TB care provision, alongside other interventions to ensure comprehensive patient support. Mobile Health Clinics, Tuberculosis, Urban Slums, Interrupted Time Series Analysis Treatment effect was estimated with $\text{text}\{\text{logit}\}(\pi) = \beta_0 + \beta^* p X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Sub-Saharan, Africa, Mobile Clinics, Tuberculosis, Epidemiology, Interrupted Time Series, Healthcare Access*

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