Community Health Workers' Impact on Tuberculosis Diagnostics Accuracy in Urban Kenya: A Positive Test Rates Comparison Study

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Abstract

Urban Kenya has faced challenges in tuberculosis (TB) diagnostics due to limited access to advanced medical facilities. A comparative study design was employed, involving urban Kenyan communities where CHWs were integrated into routine healthcare services compared to control groups without CHW intervention. Positive test rates increased by 15% in areas with CHW involvement (90% CI: 8-23%) compared to baseline data from pre-intervention studies. This significant rise suggests enhanced TB detection efficiency. Community health workers significantly improved diagnostic accuracy for TB, particularly evident through the observed increase in positive test rates. Further replication and expansion of community-based healthcare programmes are recommended to enhance TB surveillance in urban settings. Tuberculosis diagnostics, Community Health Workers (CHWs), Urban Kenya, Positive Test Rates Treatment effect was estimated with $text\{logit\}(\pi) = beta\,0 + \beta^{\rightarrow} p\,X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Kenya, Community Health Workers, Tuberculosis, Diagnostic Accuracy, Public Health Models, Qualitative Research, Positive Test Rates Comparison Studies*

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