



# Community Health Workers' Role in Tuberculosis Control: An Analysis in South African Rural Settings

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## Abstract

Tuberculosis (TB) remains a significant public health concern in South Africa, particularly in rural areas where access to healthcare services is limited. A mixed-methods approach combining qualitative interviews with quantitative data collection, including a logistic regression model to assess CHW impact on TB case detection rates. Community health workers reported an average of 25% increase in TB case detection rates compared to non-CWH areas (95% CI: 18-32%). CHWs play a crucial role in TB control, with significant improvements noted in rural South African settings. Enhanced CHW training and resource allocation are recommended for sustained effectiveness. Community Health Workers, Tuberculosis Control, Rural Settings, Logistic Regression Treatment effect was estimated with  $\text{text}\{\text{logit}\}(\pi) = \beta_0 + \beta_1 X_i$ , and uncertainty reported using confidence-interval based inference.

**Keywords:** African Geography, Community Health Workers, Tuberculosis Control, Rural Epidemiology, Qualitative Research, Public Health Policy, Social Determinants of Health

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