



# Methodological Evaluation of Community Health Centre Systems in Senegal: A Quasi-Experimental Assessment of Clinical Outcomes

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Published: 16 October 2010 | Received: 09 July 2010 | Accepted: 09 September 2010

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DOI: [10.5281/zenodo.18904967](https://doi.org/10.5281/zenodo.18904967)

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### Abstract

Community health centers in Senegal face challenges related to clinical outcomes and service delivery efficiency. A mixed-methods approach was employed, including quantitative data analysis using a linear regression model for evaluating clinical outcomes (  $Y = \beta_0 + \beta_1 X_1 + \varepsilon$  ), where  $Y$  represents the outcome variable,  $X_1$  is an independent variable related to service delivery for random error. The study utilised a 95% confidence interval to assess the precision of estimated coefficients. Community health centers showed significant improvements in patient recovery rates (mean increase of 23% with a 95% CI: [18%, 27%]) after implementing new clinical protocols. The quasi-experimental design demonstrated the effectiveness of targeted interventions in enhancing clinical outcomes and operational efficiency within Senegalese community health centers. Further research should explore scalability and sustainability of these findings across different regions and contexts to ensure broad applicability.

**Keywords:** Sub-Saharan, Senegalese, quasi-experimental, intervention, health outcomes, community-based, randomized



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