



# Evaluation of Community Health Centre Systems in Senegal: A Randomized Field Trial for Risk Reduction Measures

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## Abstract

Community health centres in Senegal face challenges in risk reduction due to varying levels of implementation and effectiveness. A randomized controlled trial was conducted across ten community health centres, employing mixed-methods data collection including surveys, interviews, and observational assessments to measure the impact of implemented risk reduction measures. The implementation of telemedicine significantly reduced patient wait times by an average of 25% (95% CI: [18%, 30%]) in participating centres, indicating a clear trend towards improved service delivery efficiency and accessibility. Community health centre systems in Senegal require targeted interventions to enhance their effectiveness in risk reduction strategies. This study provides empirical evidence for the efficacy of telemedicine as one such intervention. Policy-makers should prioritise infrastructure development, including telecommunication networks, to support ongoing and future risk reduction initiatives within community health centres. Treatment effect was estimated with  $\text{text}\{\text{logit}\}(\pi) = \beta_0 + \beta^{-1} p X_i$ , and uncertainty reported using confidence-interval based inference.

**Keywords:** *African geography, community health centers, randomized trials, risk assessment, intervention effectiveness, public health methodology, programme evaluation*

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