# Meta-Evaluation of Community Health Centre Systems in Senegal Using Difference-in-Differences for Cost-Effectiveness Analysis

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## Abstract

Community health centres in Senegal face challenges in cost-effectiveness due to varying levels of service provision. Data from multiple studies were pooled, analysed with a difference-in-differences model accounting for potential confounders such as socio-economic status and access to healthcare infrastructure. A significant proportion (35%) of community health centres reported cost savings through improved service delivery over baseline levels, though variability was observed across regions. The difference-in-differences model demonstrated a moderate level of cost-effectiveness with robust standard errors indicating reliable estimates. Further studies should consider implementation costs and long-term sustainability in addition to short-term savings for comprehensive evaluation. Treatment effect was estimated with $text\{logit\}(\pi)=beta\,0+\beta^{\top}p\,X_i$, and uncertainty reported using confidence-interval based inference.

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