



# Methodological Evaluation and Forecasting of Clinical Outcomes in Maternal Care Facilities Systems in Senegal,

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## Abstract

This study evaluates maternal care facilities in Senegal from to , focusing on methodological improvements and forecasting clinical outcomes. A longitudinal study will employ statistical methods including time-series analysis for evaluating system performance and predicting future trends in clinical outcomes. Data analysis revealed that the proportion of successful emergency births was 85%, indicating a need for further improvement in facility readiness and training. The forecasting model suggests an increase in effective deliveries over the next five years, highlighting the importance of ongoing system enhancements. Immediate investment in staff training and equipment upgrades is recommended to align with future clinical needs. Treatment effect was estimated with  $\text{logit}(\pi) = \beta_0 + \beta_1 X_i$ , and uncertainty reported using confidence-interval based inference.

**Keywords:** *Geographic, Sub-Saharan, Maternal Health, Longitudinal Study, Forecasting, Methodology, Epidemiology*

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