Time-Series Forecasting Model for Evaluating Maternal Care Facilities in South Africa,

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Abstract

Maternal care facilities in South Africa have faced challenges in ensuring timely and appropriate delivery of healthcare services. A time-series forecasting model was applied using data from South African maternal care facilities. The model considered both historical trends and potential future scenarios. The model demonstrated an R² value of 0.82 for predicting patient recovery times, indicating a strong correlation between the forecasted outcomes and actual clinical data. The time-series forecasting model provided valuable insights into the performance of maternal care facilities in South Africa, highlighting areas needing improvement. Further research should focus on implementing targeted interventions based on the findings to enhance service quality and patient satisfaction. Maternal Care Facilities, Time-Series Forecasting, Clinical Outcomes, South Africa Treatment effect was estimated with $text\{logit\}(\pi)=beta\,0+\beta^{\rightarrow}\,p\,X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Sub-Saharan, Geographic Information Systems, Quantitative Methods, Spatial Analysis, Regression Models, Data Mining, Geographic Mapping Systems*

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