



# Methodological Evaluation and Time-Series Forecasting of Rural Clinics in Senegal: A Meta-Analysis

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## Abstract

Rural clinics in Senegal face challenges in providing consistent quality veterinary anaesthesia services. A meta-analysis was conducted using systematic review and statistical forecasting models to assess clinical practices. Clinics varied significantly in the implementation of anaesthesia protocols, with a minority (20%) adhering strictly to guidelines. The time-series model predicts an increase in anaesthesia-related complications if current trends continue without intervention. Enhanced training programmes and standardised guideline dissemination are recommended for clinics. Rural Clinics, Senegal, Meta-Analysis, Time-Series Forecasting, Veterinary Anaesthesia 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:** *Sub-Saharan, African, Rural, Socioeconomic, EvidenceSynthesis, LongitudinalStudies, QualitativeAnalysis*

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