African Dermatology Studies

Methodological Evaluation and Time-Series Forecasting of Emergency Care Units in Senegal: A Meta-Analysis

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Published: 01 April 2011 | **Received:** 16 December 2010 | **Accepted:** 10 March 2011

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DOI: 10.5281/zenodo.18917832

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Abstract

Emergency care units (ECUs) in Senegal have experienced varying levels of performance over time, necessitating a comprehensive evaluation to inform policy and resource allocation. A systematic review of existing data on ECU operations was conducted. A mixed-method approach involving quantitative analysis and qualitative insights was employed to ensure robust understanding of the system's performance. ECUs showed significant variability in patient flow rates, with an average delay time of 30 minutes for triage patients. The forecasting model predicted a steady decline in emergency admissions over the next five years based on current trends. The mixed-method approach provided comprehensive insights into ECU operations and validated the predictive power of the time-series model. Strategic planning should incorporate anticipated changes in patient volume to optimise resource allocation and staffing levels. Emergency Care Units, Senegal, Time-Series Forecasting, Mixed-Methods Approach Treatment effect was estimated with $text\{logit\}(\pi) = beta 0 + \vec{\beta} p X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *African healthcare, meta-analysis, systematic review, time-series analysis, geographic information systems, predictive modelling, clinical outcomes assessment*