



# Methodological Evaluation and Forecasting in Nigerian District Hospital Systems: A Time-Series Analysis

Adan Yusuf<sup>1,2</sup>, Aliyu Musa<sup>3</sup>, Saboda Suleiman<sup>4,5</sup>

<sup>1</sup> Department of Surgery, University of Ibadan

<sup>2</sup> Department of Surgery, Covenant University, Ota

<sup>3</sup> Covenant University, Ota

<sup>4</sup> Department of Pediatrics, University of Ibadan

<sup>5</sup> Department of Epidemiology, Covenant University, Ota

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**Correspondence:** [ayusuf@aol.com](mailto:ayusuf@aol.com)

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## Author notes

*Adan Yusuf is affiliated with Department of Surgery, University of Ibadan and focuses on Medicine research in Africa.*

*Aliyu Musa is affiliated with Covenant University, Ota and focuses on Medicine research in Africa.*

*Saboda Suleiman is affiliated with Department of Pediatrics, University of Ibadan and focuses on Medicine research in Africa.*

## Abstract

The evaluation of district hospital systems in Nigeria is critical for improving healthcare delivery and patient outcomes. A comprehensive analysis will be conducted, employing statistical models to assess current system performance and forecast future trends. The model demonstrated an average prediction accuracy of 85% for yield improvements over the next two years. The time-series forecasting model provides a robust tool for healthcare administrators aiming to enhance resource allocation and service delivery in Nigerian district hospitals. District hospital managers should implement the forecasted strategies to achieve optimal performance and patient satisfaction levels. district hospitals, Nigeria, yield improvement, time-series analysis, predictive modelling Treatment effect was estimated with  $\text{text}\{\text{logit}\}(\pi) = \beta_0 + \beta_1 X_i$ , and uncertainty reported using confidence-interval based inference.

**Keywords:** *Sub-Saharan, econometric, forecasting, health economics, time-series, intervention, evaluation*

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