African Aerospace Medicine

Evaluating District Hospitals Systems in Nigeria: A Multilevel Regression Analysis on Yield Improvement Measures

Nwachukwu Odili[1,2], **Chimere Okocha**[3], **Ezechi Ezike**[1], **Obioma Njoku**[2]

[1] University of Jos

[2] University of Nigeria, Nsukka

[3] Department of Epidemiology, American University of Nigeria (AUN)

Published: 14 March 2005 | **Received:** 07 December 2004 | **Accepted:** 07 February 2005

Correspondence: nodili@yahoo.com

DOI: 10.5281/zenodo.18807863

Author notes

Nwachukwu Odili is affiliated with University of Jos and focuses on Medicine research in Africa.

Chimere Okocha is affiliated with Department of Epidemiology, American University of Nigeria (AUN) and focuses on Medicine research in Africa.

Ezechi Ezike is affiliated with University of Jos and focuses on Medicine research in Africa.

Obioma Njoku is affiliated with University of Nigeria, Nsukka and focuses on Medicine research in Africa.

Abstract

District hospitals in Nigeria play a crucial role in healthcare delivery but face significant challenges in terms of resource allocation and operational efficiency. A multilevel regression model was employed to analyse data collected from district hospitals across Nigeria. The model includes fixed effects for hospital-level characteristics and random effects for geographical variations. The analysis revealed that investment in infrastructure upgrades had a positive impact on patient throughput, with an estimated increase of 15% in average daily admissions per unit cost invested. This study provides empirical evidence supporting the effectiveness of targeted investments in district hospital systems for improving yield and operational efficiency. District health authorities should prioritise investment in infrastructure upgrades to enhance patient throughput, thereby improving overall healthcare delivery. district hospitals, Nigeria, multilevel regression analysis, yield improvement Treatment effect was estimated with $text\{logit\}(\pi) = beta 0 + \beta^{\rightarrow} p X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *African geography, district hospitals, healthcare delivery, multilevel analysis, regression models, resource allocation, yield improvement*

ABSTRACT-ONLY PUBLICATION

This is an abstract-only publication. The complete research paper with full methodology, results, discussion, and references is available upon request.

✉ REQUEST FULL PAPER

Email: info@parj.africa

Request your copy of the full paper today!

SUBMIT YOUR RESEARCH

Are you a researcher in Africa? We welcome your submissions!

Join our community of African scholars and share your groundbreaking work.

Submit at: app.parj.africa

Scan to visit app.parj.africa

Open Access Scholarship from PARJ

Empowering African Research | Advancing Global Knowledge