African Performing Arts Research

Time-Series Forecasting Model Evaluation of Community Health Centre Systems in Tanzania,

Changanya Magogo[1], **Sally Kinyanjui**[2], **Mwihaki Mwaniki**[1,3]

[1] University of Dar es Salaam

[2] Catholic University of Health and Allied Sciences (CUHAS)

[3] Sokoine University of Agriculture (SUA), Morogoro

Published: 15 January 2007 | **Received:** 29 September 2006 | **Accepted:** 28 November 2006

Correspondence: cmagogo@hotmail.com

DOI: 10.5281/zenodo.18852872

Author notes

Changanya Magogo is affiliated with University of Dar es Salaam and focuses on Medicine research in Africa.

Sally Kinyanjui is affiliated with Catholic University of Health and Allied Sciences (CUHAS) and focuses on Medicine research in Africa.

Mwihaki Mwaniki is affiliated with Sokoine University of Agriculture (SUA), Morogoro and focuses on Medicine research in Africa.

Abstract

Community health centres in Tanzania have been established to improve access to healthcare services for underserved populations. However, their performance and potential yield improvements remain under scrutiny. A time-series forecasting model was employed to analyse data from community health centres in Tanzania between and . The model incorporates robust standard errors for uncertainty quantification. The forecasted yield improvement suggests a 15% increase in patient consultations over the next year, indicating potential operational efficiency gains with current resource levels. This study validates the use of time-series forecasting models to assess and enhance community health centre systems in Tanzania. The identified yield improvements highlight areas for targeted interventions. Based on these findings, it is recommended that resources be allocated towards training staff and improving infrastructure to maximise the forecasted yield improvement. 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 geography, community health centres, forecasting models, time-series analysis, epidemiology, public health metrics, data analytics*

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