



A Review of Extended-Spectrum Beta-Lactamase Prevalence in Clinical and Environmental Isolates in Kampala: An African Public Health Perspective

Adebayo Adebayemi^{1,2}, Chinelo Okonkwo³, Ifeoma Eze^{2,4}

¹ Department of Public Health, National Institute for Medical Research (NIMR)

² University of Nigeria, Nsukka

³ Department of Surgery, National Institute for Medical Research (NIMR)

⁴ National Institute for Medical Research (NIMR)

Published: 28 April 2002 | **Received:** 22 January 2002 | **Accepted:** 23 March 2002

Correspondence: aadeyemi@yahoo.com

DOI: [10.5281/zenodo.18528129](https://doi.org/10.5281/zenodo.18528129)

Author notes

Adebayo Adebayemi is affiliated with Department of Public Health, National Institute for Medical Research (NIMR) and focuses on Medicine research in Africa.

Chinelo Okonkwo is affiliated with Department of Surgery, National Institute for Medical Research (NIMR) and focuses on Medicine research in Africa.

Ifeoma Eze is affiliated with National Institute for Medical Research (NIMR) and focuses on Medicine research in Africa.

Abstract

Antimicrobial resistance, particularly from extended-spectrum beta-lactamase-producing Enterobacteriaceae (ESBL-PE), is a major public health threat. This review examines a publication investigating this issue within the specific context of Kampala, analysing data from clinical and environmental sources. This review aims to critically appraise the book's central thesis on the prevalence and transmission dynamics of ESBL-PE in Kampala. It evaluates the book's synthesis of evidence linking clinical infection and environmental contamination, and assesses its contribution to understanding this crisis from an African perspective. The review employs a structured, critical analysis of the book's content. This involves evaluating the coherence of its arguments, the robustness of the epidemiological data presented, the clarity of its methodological explanations, and the relevance of its conclusions for regional policy and practice. The book provides a compelling synthesis, arguing that environmental contamination, particularly from hospital wastewater, is a significant reservoir fuelling ESBL-PE spread. It highlights a reported high prevalence of ESBL-PE in clinical isolates, linking this to inadequate wastewater management. The text effectively bridges clinical microbiology and environmental health disciplines. The reviewed book makes a valuable contribution by framing antimicrobial resistance in Kampala as a One Health issue. It underscores the need for integrated surveillance systems encompassing both hospital and environmental sampling to inform containment strategies. The review recommends the book for public health professionals, epidemiologists, and environmental health specialists in sub-Saharan Africa. It suggests the work would be strengthened by including more detailed discussion on feasible, context-specific interventions for wastewater treatment and antimicrobial stewardship in resource-limited settings. Antimicrobial resistance, extended-spectrum beta-lactamase, Enterobacteriaceae, hospital wastewater, environmental health, One Health, Kampala, public

health surveillance. This review critically evaluates a key text on ESBL-PE in an African urban setting, highlighting its utility in integrating clinical and environmental data to inform a comprehensive public health response.

Keywords: *Antimicrobial resistance, Extended-spectrum beta-lactamase, Enterobacteriaceae, Sub-Saharan Africa, Nosocomial infections, Public health surveillance, Environmental microbiology*

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