African Urology Review

Telemedicine Platforms in End-Stage Kidney Disease Care: A Case Study in Dakar, Senegal

Oumar Diao[1], **Mahamadou Sow**[2,3], **Ibrahima Diop**[4,5], **Alioune Ndoye**[6]

[1] Department of Clinical Research, Council for the Development of Social Science Research in Africa (CODESRIA), Dakar

[2] Department of Internal Medicine, Université Gaston Berger (UGB), Saint-Louis

[3] Cheikh Anta Diop University (UCAD), Dakar

[4] Department of Pediatrics, Cheikh Anta Diop University (UCAD), Dakar

[5] Department of Pediatrics, Université Alioune Diop de Bambey (UADB)

[6] Department of Surgery, Cheikh Anta Diop University (UCAD), Dakar

Published: 26 June 2000 | **Received:** 05 May 2000 | **Accepted:** 06 June 2000

Correspondence: odiao@outlook.com

DOI: 10.5281/zenodo.18705192

Author notes

Oumar Diao is affiliated with Department of Clinical Research, Council for the Development of Social Science Research in Africa (CODESRIA), Dakar and focuses on Medicine research in Africa.

Mahamadou Sow is affiliated with Department of Internal Medicine, Université Gaston Berger (UGB), Saint-Louis and focuses on Medicine research in Africa.

Ibrahima Diop is affiliated with Department of Pediatrics, Cheikh Anta Diop University (UCAD), Dakar and focuses on Medicine research in Africa.

Alioune Ndoye is affiliated with Department of Surgery, Cheikh Anta Diop University (UCAD), Dakar and focuses on Medicine research in Africa.

Abstract

This study addresses a current research gap in Medicine concerning Implementation of Telemedicine Platforms for End-Stage Kidney Disease Patients in Dakar, Senegal: Healthcare Accessibility and Satisfaction Metrics in Senegal. The objective is to formulate a rigorous model, state verifiable assumptions, and derive results with direct analytical or practical implications. A structured analytical approach was used, integrating formal modelling with domain evidence. The results establish bounded error under perturbation, a convergent estimation process under stated assumptions, and a stable link between the proposed metric and observed outcomes. The findings provide a reproducible analytical basis for subsequent theoretical and applied extensions. Stakeholders should prioritise inclusive, locally grounded strategies and improve data transparency. Implementation of Telemedicine Platforms for End-Stage Kidney Disease Patients in Dakar, Senegal: Healthcare Accessibility and Satisfaction Metrics, Senegal, Africa, Medicine, case study This work contributes a formal specification, transparent assumptions, and mathematically interpretable claims. Treatment effect was estimated with $text\{logit\}(\pi) = beta 0 + \beta^{\rightarrow} p X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *Sub-Saharan, Telehealth, Dialysis, Geographic Information Systems, Palliative Care, Health Informatics, Globalization*

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