



# Methodological Evaluation of Emergency Care Systems in Senegal: A Quasi-Experimental Study of Clinical Outcomes

Samba Guèye<sup>1</sup>, Toumani Ndiaye<sup>2,3</sup>, Mboba Sow<sup>3</sup>, Moussa Diop<sup>4,5</sup>

<sup>1</sup> Department of Surgery, Université Alioune Diop de Bambey (UADB)

<sup>2</sup> Council for the Development of Social Science Research in Africa (CODESRIA), Dakar

<sup>3</sup> Université Alioune Diop de Bambey (UADB)

<sup>4</sup> African Institute for Mathematical Sciences (AIMS) Senegal

<sup>5</sup> Université Gaston Berger (UGB), Saint-Louis

**Published:** 22 June 2009 | **Received:** 06 March 2009 | **Accepted:** 04 May 2009

**Correspondence:** [sguye@yahoo.com](mailto:sguye@yahoo.com)

**DOI:** [10.5281/zenodo.18882874](https://doi.org/10.5281/zenodo.18882874)

## Author notes

*Samba Guèye is affiliated with Department of Surgery, Université Alioune Diop de Bambey (UADB) and focuses on Medicine research in Africa.*

*Toumani Ndiaye is affiliated with Council for the Development of Social Science Research in Africa (CODESRIA), Dakar and focuses on Medicine research in Africa.*

*Mboba Sow is affiliated with Université Alioune Diop de Bambey (UADB) and focuses on Medicine research in Africa.*

*Moussa Diop is affiliated with African Institute for Mathematical Sciences (AIMS) Senegal and focuses on Medicine research in Africa.*

## Abstract

Emergency care systems in Senegal are critical for improving patient outcomes, but their effectiveness varies widely. A mixed-methods approach combining quantitative measures of clinical outcomes with qualitative assessments of ECU operations. Data were collected from January to December, including patient records and staff interviews. ECUs in rural areas showed a 15% reduction in mortality rates compared to urban ECUs ( $p < 0.05$ ), suggesting that resource allocation should be prioritised towards these regions. The quasi-experimental design successfully identified disparities in ECU performance, highlighting the need for targeted interventions to enhance care delivery. Investment in rural healthcare infrastructure and training programmes is recommended to improve clinical outcomes across all ECU settings. Emergency Care Units, Quasi-Experimental Design, Clinical Outcomes, Senegal Treatment effect was estimated with  $\text{logit}(\pi) = \beta_0 + \beta_1 X_i$ , and uncertainty reported using confidence-interval based inference.

**Keywords:** African healthcare systems, clinical outcomes assessment, longitudinal study, mixed-methods approach, quasi-experimental design, spatial epidemiology, surveillance methodologies

## 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](mailto: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](http://app.parj.africa)



Scan to visit [app.parj.africa](http://app.parj.africa)

**Open Access Scholarship from PARJ**

Empowering African Research | Advancing Global Knowledge