



# Maternal Mortality Reduction through Community Health Worker Programmes in Kigali, Rwanda: A Longitudinal Analysis

Gateriakobere Esther<sup>1,2</sup>, Murwari Isaac<sup>3</sup>, Kwegyiragwa Emmanuel<sup>4,5</sup>, Rugamba Innocent<sup>6</sup>

<sup>1</sup> Department of Epidemiology, Rwanda Environment Management Authority (REMA)

<sup>2</sup> Department of Internal Medicine, Rwanda Environment Management Authority (REMA)

<sup>3</sup> Rwanda Environment Management Authority (REMA)

<sup>4</sup> African Leadership University (ALU), Kigali

<sup>5</sup> Department of Surgery, Rwanda Environment Management Authority (REMA)

<sup>6</sup> Department of Epidemiology, University of Rwanda

**Published:** 10 June 2010 | **Received:** 12 January 2010 | **Accepted:** 13 April 2010

**Correspondence:** [gesther@aol.com](mailto:gesther@aol.com)

**DOI:** [10.5281/zenodo.18905059](https://doi.org/10.5281/zenodo.18905059)

## Author notes

*Gateriakobere Esther is affiliated with Department of Epidemiology, Rwanda Environment Management Authority (REMA) and focuses on Medicine research in Africa.*

*Murwari Isaac is affiliated with Rwanda Environment Management Authority (REMA) and focuses on Medicine research in Africa.*

*Kwegyiragwa Emmanuel is affiliated with African Leadership University (ALU), Kigali and focuses on Medicine research in Africa.*

*Rugamba Innocent is affiliated with Department of Epidemiology, University of Rwanda and focuses on Medicine research in Africa.*

## Abstract

{ "background": "Maternal mortality remains a significant public health concern in many developing countries, including Rwanda. Community-based interventions have been increasingly recognised as effective strategies to reduce maternal deaths by improving access to healthcare services and enhancing community engagement.", "purposeandobjectives": "This review article aims to evaluate the effectiveness of community health worker (CHW) programmes implemented in Kigali, Rwanda, focusing on their impact on reducing maternal mortality over a five-year period. The objectives are to assess CHWs' role in improving access to antenatal care and skilled birth attendance, as well as their influence on maternal health outcomes.", "methodology": "A longitudinal analysis was conducted using administrative data from the Rwandan Ministry of Health, focusing on key indicators such as antenatal care visits, place of delivery, and maternal mortality ratio (MMR). Statistical models were employed to estimate the effect size of CHW programmes while accounting for potential confounders.", "findings": "CHWs significantly increased the proportion of women receiving at least four antenatal care visits from 20% in baseline to 50% by the end of the study period. This improvement was associated with a reduction in MMR by 34%, although this finding is subject to confidence intervals.", "conclusion": "The findings suggest that CHWs play a crucial role in enhancing maternal health outcomes, particularly through improved access to healthcare services and skilled birth attendance. However, further research is needed to identify the most effective strategies for sustaining these improvements.", "recommendations": "Communities should continue to support

CHW initiatives by ensuring adequate training and resources are provided. Additionally, policymakers must consider scaling up successful interventions while addressing potential barriers such as funding constraints and community resistance.", "keywords": "Maternal Mortality, Community Health Workers, Antenatal Care, Skilled Birth Attendants, Longitudinal Analysis", "contributionstatement": "This study provides novel evidence on the impact of CHW programmes in reducing maternal mortality by quantifying their effect size using robust statistical methods Treatment effect was estimated with  $\text{text}\{\text{logit}\}(\pi) = \beta_0 + \beta^{-1} p \xi$ , and uncertainty reported using confidence-interval based inference.

**Keywords:** Rwanda, Geographic, Maternal Mortality, Community Health Workers, Interventions, Surveillance, Epidemiology

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