



Telehealth Impacts on Diabetic Retinopathy Screening in Urban Youth Slums of Nairobi: A Three-Year Assessment

Oscar Mburu Mutua¹, Mwai Kibaki Ochieng^{2,3}, Joseph Kire Wanyama^{2,4}

¹ Moi University

² Strathmore University

³ Department of Pediatrics, Kenya Agricultural and Livestock Research Organization (KALRO)

⁴ Kenya Agricultural and Livestock Research Organization (KALRO)

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Correspondence: omutua@gmail.com

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Author notes

Oscar Mburu Mutua is affiliated with Moi University and focuses on Medicine research in Africa.

Mwai Kibaki Ochieng is affiliated with Strathmore University and focuses on Medicine research in Africa.

Joseph Kire Wanyama is affiliated with Strathmore University and focuses on Medicine research in Africa.

Abstract

Diabetic retinopathy is a leading cause of vision loss among urban youth in Nairobi slums, where access to healthcare and diagnostic resources are limited. A mixed-methods approach including remote visual assessments via telehealth platforms, structured questionnaires on access barriers and health outcomes, and longitudinal follow-ups. Telehealth enabled the identification of diabetic retinopathy cases with an early detection rate of 85%, compared to a baseline of 60% in conventional screening methods. Telehealth significantly improved diabetic retinopathy screening coverage among urban youth slums, reducing diagnostic delays and enhancing patient access to care. Implement telehealth as a routine component of diabetic retinopathy surveillance programmes for urban youth slums, with further research on cost-effectiveness and scalability. Treatment effect was estimated with $\text{text}\{\text{logit}\}(\pi) = \beta_0 + \beta_1 X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: Sub-Saharan, Telehealth, Retinopathy, Youth, Nairobi, Geographic, Methodology

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