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Telemedicine in Rural Ethiopia: Impact Evaluation of Diabetic Retinopathy Diagnosis Services

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Abstract

Diabetic retinopathy is a leading cause of blindness in Ethiopia, with limited access to specialist care in rural areas. A mixed-methods approach was employed, including patient surveys and clinic observations for data collection. Telemedicine services improved timely access to specialist care by reducing travel time from an average of 6 hours to less than 1 hour. The study demonstrated that telemedicine significantly enhanced the accessibility and efficiency of diabetic retinopathy diagnosis in rural Ethiopia, improving patient outcomes. Telemedicine should be integrated into routine health care services for broader access to specialist care. Treatment effect was estimated with $text{logit}(\pi) = beta 0 + \vec{\beta} p X_i$, and uncertainty reported using confidence-interval based inference.

Keywords: *African geography, telemedicine, diabetic retinopathy, rural health care, qualitative assessment, outcome evaluation, precision medicine*

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