



# Telemedicine in Surgical Care: A Meta-Analysis of Short-term Outcomes in Nairobi Hospitals,

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## Abstract

Telemedicine has emerged as a promising solution for improving access to surgical care in underserved regions. A comprehensive literature review was conducted using electronic databases such as PubMed and Web of Science to identify relevant studies. Studies were selected based on predefined inclusion criteria including publication date (-), study design, and outcome measures related to surgical patient care. The analysis revealed a statistically significant improvement in postoperative complications rates among telemedicine-assisted cases when compared to traditional in-person consultations ( $p < 0.05$ ). Telemedicine services appear effective in reducing postoperative complications within six months of implementation, suggesting potential benefits for resource-limited settings. Further research is recommended to evaluate long-term outcomes and cost-effectiveness of telemedicine in surgical care delivery. Treatment effect was estimated with  $\text{text}\{ \logit \}(\pi) = \beta_0 + \beta^{-1} p X_i$ , and uncertainty reported using confidence-interval based inference.

**Keywords:** *Telemedicine, Surgical Care, Sub-Saharan Africa, Randomized Controlled Trial, Outcome Evaluation, Geographic Information Systems, Comparative Effectiveness Research*

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