

# **A Systematic Review of Nurse-Led Prehabilitation and Its Effect on Postoperative Length of Stay for Oesophageal Cancer Patients in an African Context: A Nairobi Case Study**

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## | Abstract

Oesophageal cancer represents a significant health burden in Africa, often presenting at a late stage with high postoperative morbidity. In resource-constrained settings such as Nairobi, Kenya, reducing postoperative length of stay is crucial for improving patient outcomes and optimising hospital efficiency. Prehabilitation aims to enhance physiological reserve before surgery. While promising, the specific effectiveness of nurse-led prehabilitation models within African thoracic surgery contexts remains unclear. This systematic review aimed to synthesise evidence on the effectiveness of nurse-led prehabilitation programmes on postoperative length of stay for oesophageal cancer patients, with a specific focus on applicability within the African context using Nairobi as a case study. A systematic search of multiple electronic databases was conducted following PRISMA guidelines. Included studies investigated nurse-led prehabilitation interventions for oesophageal cancer patients and reported postoperative length of stay as an outcome. No geographical restrictions were applied initially. Study screening, selection, and quality assessment were performed independently by two reviewers. Data were extracted and synthesised narratively. The search identified a limited number of directly relevant studies, with no primary research conducted specifically within an African setting. The available international evidence consistently indicated a trend towards reduced postoperative length of stay for patients

undergoing structured, nurse-led prehabilitation. Core effective components identified included nutritional optimisation and respiratory physiotherapy. A common finding was a reported reduction in median length of stay of approximately two to four days in programmes incorporating these elements. Although direct evidence from Africa is absent, international literature suggests nurse-led prehabilitation has potential to reduce postoperative length of stay for oesophageal cancer patients. The identified core components appear theoretically feasible within a Nairobi hospital context but would require careful adaptation to local resources and challenges. Pilot studies of culturally and resource-appropriate nurse-led prehabilitation programmes are urgently needed within African thoracic surgery units. Future primary research should evaluate the feasibility, implementation, and impact of such programmes in settings like Nairobi. Prehabilitation, oesophageal cancer, length of stay, nurse-led, thoracic surgery, Africa, Kenya, systematic review. This review consolidates the limited global evidence on nurse-led prehabilitation for oesophageal cancer and provides a focused analysis of its potential applicability and required adaptations for an African clinical context, specifically informing future research and practice in Nairobi.

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