



# A Methodological Protocol for Evaluating the Impact of Structured Discharge Planning on 30-Day Readmission Rates in a Nairobi Heart Failure Cohort: A Study Design for Kenyatta National Hospital

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## Abstract

Heart failure is a leading cause of hospitalisation and readmission in sub-Saharan Africa, imposing a substantial burden on health systems. High 30-day readmission rates for heart failure patients at Kenyatta National Hospital indicate gaps in transitional care. While structured discharge planning is a promising intervention, robust methodological protocols for its evaluation in this setting are scarce. This methodology article details the design for a study to evaluate the effectiveness of a structured discharge planning protocol on 30-day readmission rates for heart failure patients at Kenyatta National Hospital, Nairobi. The primary objective is to compare readmission rates between an intervention group receiving the protocol and a control group receiving usual care. The study employs a quasi-experimental design with a non-equivalent control group. Consecutive adult patients admitted with a primary diagnosis of heart failure will be allocated to intervention or control wards based on ward of admission. The multi-component intervention protocol includes structured patient education, medication reconciliation, scheduled follow-up coordination, and post-discharge telephone support. Data on 30-day readmissions, mortality, and process adherence will be collected from hospital records and telephone follow-up. Analysis will use chi-square tests and logistic regression, adjusting for key clinical and demographic covariates. As a methodology article, this paper presents no empirical results. The study is designed to detect a clinically significant absolute reduction in the 30-day readmission rate. This protocol provides a detailed methodological framework for evaluating a structured discharge planning intervention in a resource-limited tertiary hospital. The design aims to generate robust evidence on a key strategy for improving heart failure outcomes. Researchers applying this methodology should secure strong engagement with clinical staff for protocol integration and plan strategies to minimise contamination between study wards. Future studies could adapt this design for other chronic conditions or settings. heart failure, patient readmission, patient discharge, transitional care, Kenya, sub-Saharan Africa, methodology, quasi-experimental study This article provides a formalised methodological protocol for health systems researchers evaluating transitional care interventions in resource-constrained settings, with a focus on practical design considerations.

**Keywords:** *Heart failure, Discharge planning, Readmission rates, Sub-Saharan Africa, Cohort study, Protocol development, Health services research*

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