

INVENTORY MANAGEMENT PRACTICES AT MBAGATHI COUNTY REFERRAL HOSPITAL, KENYA: STAFF PERCEPTIONS AND SERVICE DELIVERY IMPLICATIONSChepkirui Cheruiyot Monica¹ and Dr. Daniel A. Otwor²¹ School of Management and Leadership, Management University of Africa, Nairobi, Kenya² Management University of Africa, Nairobi, Kenya | * Corresponding author: monica.chepkirui@yahoo.com

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ABSTRACT

Background: Continuous availability of medicines, equipment and other supplies depends on stock control, procurement, forecasting and supplier coordination. Objective: To describe staff perceptions of inventory management practices at Mbagathi County Referral Hospital, Nairobi, Kenya, as the third objective of a broader organizational-resources study. Methods: A descriptive cross-sectional survey targeted 273 hospital employees. A stratified sample of 162 was planned, and 120 completed questionnaires were returned (74.1%). Five inventory management statements were summarized with means and standard deviations on a five-point agreement scale. Results: Effective stock control received the highest mean ($M = 4.087$, $SD = 1.018$). Respondents also rated timely procurement ($M = 4.001$, $SD = 0.992$) and infrequent stock-outs ($M = 3.993$, $SD = 1.100$) positively. Forecasting to prevent shortages and surplus stock ($M = 3.856$, $SD = 0.921$) and supplier coordination ($M = 3.840$, $SD = 1.022$) were rated lower. Conclusion: Staff generally reported favorable inventory practices, while forecasting and supplier coordination warrant management attention. These perceptions do not establish actual commodity availability or a measured association with operational performance; the source does not present regression output for this objective.

Keywords: hospital operations; inventory management; Kenya; procurement; stock control; supplier coordination

1. INTRODUCTION

Public hospitals require reliable flows of medicines, equipment and consumables to maintain continuity of care. Inventory practices influence whether staff can locate the right items when services need them. Stock records, procurement schedules, forecasts and supplier communication are linked operational tasks; weakness in any one can create delays even when others function well. Kenyan work on public healthcare supply chains has examined resilience and service delivery in the western region (Mogere et al., 2023), while facility-level studies have documented the need to examine actual commodity availability alongside management processes.

The parent project at Mbagathi County Referral Hospital examined several organizational resources and operational performance. This article focuses on its third objective: assessing inventory management practices in relation to hospital operations. It reports the available item-level descriptive statistics and distinguishes staff assessments from stock ledgers, stock-out duration and patient-flow measures.

2. LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

Inventory management links demand estimates to procurement, receipt, storage, issue and replenishment. Timely procurement can reduce interruptions only if orders reflect consumption and suppliers deliver the required quantities. Forecasting addresses both shortages and excess stock, while accurate records support reorder decisions. Mogere et al. (2023) considered the wider relationship between supply-chain resilience and service delivery in western Kenyan public facilities. These issues justify examining each practice separately at Mbagathi rather than treating a favorable overall impression as proof of reliable supply.

3. METHODS

The parent study used a descriptive cross-sectional questionnaire survey at Mbagathi County Referral Hospital in Nairobi County. Its target population comprised 273 management, clinical, administrative, procurement and finance staff. A stratified sample of 162 was selected; 120 questionnaires were returned, a response rate of 74.1%. Respondents rated five statements concerning stock control, procurement timeliness, stock-outs, supplier coordination and forecasting. The supplied project reports means and standard deviations for each statement. It describes a proposed multivariable regression model in its methods chapter but provides no inventory-specific coefficient, confidence interval or p-value in its results; no inferential estimate is reproduced here. Participation was described as voluntary and confidential. Ethical approval and permission identifiers require confirmation from the study record.

4. RESULTS

The five item means ranged from 3.840 to 4.087, above the neutral midpoint of 3.0. Stock control was rated highest, while supplier coordination and forecasting were relatively lower. The largest standard deviation occurred for the stock-out statement (1.100), indicating more varied staff experiences than for the forecasting item (0.921). Agreement that stock-outs are infrequent does not directly measure their actual frequency or duration.

Table 1. Staff perceptions of inventory management practices (n = 120)

Inventory management statement	Mean	SD
Effective stock control of supplies and equipment	4.087	1.018
Procurement supports timely availability of supplies	4.001	0.992
Essential medicines and supplies rarely	3.993	1.100

stock out		
Forecasting prevents shortages and surplus stock	3.856	0.921
Supplier coordination supports timely deliveries	3.840	1.022

Note. The values are from the project's inventory management table. The project does not report item-specific denominators; n = 120 is the number of returned questionnaires.

5. DISCUSSION

Respondents viewed stock control and procurement positively, but the comparatively lower means for forecasting and supplier coordination point to practical areas for review. A hospital may maintain stock records yet still face variable delivery times or inaccurate demand estimates. The variation in responses to the stock-out item supports examining whether experiences differ by department, commodity category or period. These interpretations are management hypotheses, not measured explanations from the survey.

The project's broader aim concerned operational performance, but its results chapter does not provide the paired analysis needed to estimate the inventory–performance relationship. To test that relationship, a respondent-level inventory composite could be linked to a performance composite in a prespecified model and reported with the coefficient, confidence interval, p-value and model diagnostics. Independent inventory data such as order fulfillment, stock-out days, wastage and lead time would provide stronger operational validation.

6. CONCLUSION AND RECOMMENDATIONS

The survey suggests generally favorable staff perceptions of inventory practices at Mbagathi, with forecasting and supplier coordination receiving the lowest relative ratings. Management can review consumption records, reorder points, supplier delivery performance and the duration of stock-outs by department. Future work should compare those records with staff perceptions and patient-service indicators before attributing performance differences to inventory management.

STUDY LIMITATIONS

The analysis uses staff-reported, cross-sectional data from one hospital. Item-specific missingness, objective stock measures and an inventory-specific regression output are absent from the supplied project. The results cannot establish causation or generalize automatically to other facilities.

DECLARATIONS

Author funding and conflict-of-interest statements, ethical approval identifiers and data-sharing arrangements should be confirmed before publication.

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