Journal of Procurement & Supply Chain



Supplier Contracting and Perceived Healthcare Service Delivery in Selected Referral Hospitals in Kenya

Hellen Natilikia Nkapese, Kevin Gudda & Pauline Jeruto Keitany

ISSN: 2617-3581

Stratford Peer Reviewed Journals and Book Publishing
Journal of Procurement & Supply Chain
Volume 10||Issue 1||Page 64-74||November ||2026|
Email: info@stratfordjournals.org ISSN: 2617-3581

Supplier Contracting and Perceived Healthcare Service Delivery in Selected Referral Hospitals in Kenya

[1*]Hellen Natilikia Nkapese, [2]Kevin Gudda & [3]Pauline Jeruto Keitany

[1&2] School of Business and Economics, Maasai Mara University, Kenya

[3]School of Business and Economics, University of Kabianga

***Email of the Corresponding Author: guddakevin@gmail.com**

How to cite this article: Nkapese, H. N., Gudda, K., & Keitany, P. J. (2026). Supplier contracting and perceived healthcare service delivery in selected referral hospitals in Kenya. *Journal of Procurement & Supply Chain, 10*(1), 64–74. https://doi.org/10.53819/81018102t70128

Abstract

Reliable access to pharmaceutical products is essential for continuity of clinical care, yet procurement arrangements in public hospitals are frequently challenged by delivery delays, supplier non-performance and uneven commodity availability. This article examined the association between supplier contracting and quality healthcare service delivery in selected referral hospitals in Kenya. The analysis was guided by Principal–Agent Theory and Institutional Theory. A quantitative descriptive cross-sectional survey covered personnel in five referral hospitals, with 213 valid questionnaire responses drawn from a target population of 630 through proportionate stratified sampling and a planned sample of 245. Supplier contracting was measured through perceived logistics reliability, supplier certification, enforcement of delivery timelines, and supplier financial and operational capacity; healthcare service delivery was assessed through five indicators of medicine access, supply continuity, patient satisfaction and treatment adherence. Descriptive analysis yielded an average supplier contracting item mean of 3.87 on a five-point scale. Supplier contracting was positively correlated with perceived healthcare service delivery (Spearman's $\rho = 0.40$, $p < .001$). In a proportional-odds ordinal regression adjusting for supplier relationship management and strategic supplier evaluation, contracting remained positively associated with the ordered service delivery outcome ($B = 0.230$, $p = .007$; odds ratio = 1.259). The findings support the significance of contracting-related supplier assurance and delivery discipline, although the cross-sectional, self-reported evidence does not establish causation. Hospital procurement managers should strengthen documented supplier capacity checks, measurable delivery obligations, performance reviews and proportionate remedies while maintaining emergency responsiveness.

Keywords: *supplier contracting; pharmaceutical procurement; healthcare service delivery; contract compliance; referral hospitals; Kenya*

1.1 Background of the Study

Supplier contracting translates purchasing requirements into agreed responsibilities, quality specifications and delivery obligations. In healthcare, these arrangements matter because reliable pharmaceutical supply supports prescribing, dispensing and continuity of treatment (World Health Organization [WHO], 2023). Contracting therefore connects procurement decisions with the conditions required for service delivery. Its contribution depends on whether agreed products reach hospitals in usable quantities, at acceptable quality and within required timelines (WHO, 2024c).

Effective contracting combines supplier assurance before award with performance verification during implementation. Licensing, certification and technical capacity establish eligibility, while delivery records and acceptance checks indicate whether suppliers fulfil agreed obligations (WHO, 2024c). Supplier attributes become relevant to contracting when they are incorporated into requirements that hospitals can verify and monitor. This distinction prevents supplier capability from being treated as equivalent to effective contract administration.

Pharmaceutical supply operates within wider systems of financing, forecasting, regulation and distribution. Disruptions across these systems can affect medicine availability even where formal purchasing arrangements exist (WHO, 2023). Consequently, contract design should specify realistic delivery expectations and procedures for addressing supply interruptions. Such arrangements support, but cannot independently guarantee, sustainable access to essential medicines (WHO, 2024a, 2024b).

Pharmaceutical access is still a service-readiness substantive issue in Kenya. During the national census, the Ministry of Health (2024) found that only 16% of facilities assessed had all 28 essential health products and technologies, and 15% had all 23 tracer non-pharmaceutical commodities. These national metrics are not a direct measure of contracting performance in the hospitals of Central Rift, but they do provide an indication of the overall supply-readiness issue where hospital contracting exists. Onyango et al . (2024) also reported that procurement of essential medicines in Kenya was disrupted during the COVID-19 era, with financing, supply-chain, and regulatory vulnerabilities reported.

The selected referral hospitals depend on pharmaceutical supply to support general and specialised services. Their contracting responsibilities concern supplier eligibility, agreed delivery conditions, product acceptance and follow-up of non-performance. These responsibilities do not imply direct control over suppliers' internal finances, staffing or distribution systems. The study therefore examines employee assessments of contracting-related supplier assurance and delivery discipline, rather than independently audited contract administration.

Pharmaceutical quality requirements must remain visible throughout procurement and distribution. WHO guidance places documented standards and quality assurance within an integrated system of controls (WHO, 2024c, 2026). Accordingly, certification provides one source of assurance, while inspection and delivery verification address continuing conformity. The presence of qualification documents alone does not establish that medicines arrive when required.

In Kenya, the Essential Medicines List identifies priority products, while health-facility assessments provide a broader account of service readiness (Ministry of Health, 2023a, 2023b). These instruments establish the importance of dependable supply without demonstrating the performance of individual hospital contracts. Procurement arrangements must connect identified needs with verifiable product specifications and delivery requirements. The relevant managerial question is whether formal purchasing commitments are accompanied by reliable implementation.

International research shows that procurement arrangements depend on their implementation conditions. Parmaksiz et al. (2022) reviewed pooled procurement of medicines and vaccines, while Nepomnyashchiy and Yadav (2022) examined decentralised purchasing of essential medicines. These arrangements differ from hospital-level supplier contracting and should not be treated as interchangeable interventions. Their relevance lies in showing why purchasing structures require appropriate governance and operational support.

Healthcare quality also extends beyond pharmaceutical procurement. National and international assessments address service readiness, staffing and access alongside the availability of health products (WHO Regional Office for Africa, 2024; WHO, 2024d).

Supplier contracting is therefore considered an upstream organisational condition that may be associated with perceived service delivery. It is not treated as a direct measure of clinical effectiveness.

1.2 Statement of the Problem

Public referral hospitals are expected to provide reliable, timely and safe services supported by consistent pharmaceutical supply. However, medicine availability and supply continuity remain vulnerable to late deliveries, supplier capacity limitations, procurement process delays and weak performance follow-up. Kenya's documented health-product readiness gaps and qualitative evidence of essential-medicine supply disruptions establish the public-health significance of these challenges (Ministry of Health, 2024; Onyango et al ., 2024). A supplier agreement may satisfy administrative requirements while failing to translate into sustained clinical readiness if delivery conditions and supplier capabilities are not verified and managed throughout implementation.

Existing studies examine related but distinct procurement outcomes. Muuki and Nderui (2024) considered supplier sourcing and overall hospital performance, whereas Mwangi et al. (2025) examined contract management in healthcare public–private partnership projects. Neither outcome is interchangeable with employee assessments of medicine timeliness, supply continuity and service delivery. The present study examines whether contracting-related ratings retain an association with perceived healthcare service delivery after accounting for supplier relationship management and strategic supplier evaluation.

1.3 Research Objective

To examine the association between supplier contracting and perceived healthcare service delivery in selected referral hospitals in Kenya.

1.4 Research Hypothesis

H_0: Supplier contracting has no statistically significant association with perceived healthcare service delivery in selected referral hospitals in Kenya.

2.0 Literature Review

2.1 Theoretical Review

Principal–Agent Theory explains contractual relationships in which parties face different incentives and unequal access to information. Jensen and Meckling (1976) identify monitoring and bonding as responses to agency problems. In this study, the purchasing hospital is the principal and the pharmaceutical supplier is the agent engaged to fulfil agreed supply obligations. Information about supplier capacity, product conformity and delivery readiness may be less accessible to the hospital than to the supplier.

The theory provides a basis for interpreting the four contracting indicators. Certification and financial or operational capacity concern assurance about supplier eligibility and ability, while logistics reliability and delivery enforcement concern fulfilment of obligations. Monitoring can make performance more observable and support accountability within the contractual relationship (Jensen & Meckling, 1976). However, the questionnaire does not separately measure inspection intensity, sanctions or particular contractual clauses, so these mechanisms remain theoretical explanations.

Institutional Theory explains how formal rules, professional expectations and legitimacy shape organisational practices. Meyer and Rowan (1977) discuss the adoption of formal structures

and their possible separation from everyday activities, while DiMaggio and Powell (1983) explain institutional pressures towards organisational similarity. In public procurement, certification and documentary requirements can reflect both substantive assurance and expectations of procedural conformity. These perspectives support a distinction between demonstrating compliance and achieving reliable delivery.

The theories offer complementary interpretations of supplier contracting. Agency theory emphasises information and accountability within the hospital–supplier relationship, while institutional theory explains the wider pressures that shape procurement procedures (Jensen & Meckling, 1976; DiMaggio & Powell, 1983). Certification can indicate conformity with accepted requirements, whereas dependable fulfilment requires continuing implementation. The study tests the association between the measured contracting composite and perceived service delivery, rather than testing each theoretical mechanism separately.

This theoretical distinction is particularly relevant when suppliers satisfy qualification requirements but deliveries remain inconsistent. Formal arrangements may be only loosely connected to operational activity, a concern associated with institutional decoupling (Meyer & Rowan, 1977). Agency theory additionally draws attention to the hospital's ability to observe and respond to performance (Jensen & Meckling, 1976). Neither perspective implies that formal contracting alone produces better patient outcomes.

Contractual accountability also requires workable procedures for managing variation and urgent demand. The practical objective is to define responsibilities and lawful escalation arrangements while maintaining pharmaceutical quality assurance (WHO, 2024c). Flexibility is therefore a proposed feature of implementation, rather than a mechanism demonstrated by the present data. This interpretation avoids attributing a formal–informal dichotomy to DiMaggio and Powell's isomorphism framework.

2.2 Empirical Literature Review

2.2.1 Contract Design, Delivery Obligations and Supply Reliability

The level of clarity a hospital and supplier have in their contract with respect to products, quantities, delivery milestones, acceptance conditions, prices and remedies depends on the contract design. When commitments are quantifiable and monitored by procurement, procurement teams can detect early on what is not working and take action. Muuki and Nderui (2024) conducted a study on public level five hospitals in Nairobi City County and found that contract management had a positive effect on hospital performance ($\beta = 0.321$, $p < .001$). This finding supports the relevance of contracting to hospital performance, although that outcome is broader than medicine-specific timeliness or continuity of care.

Mwangi et al. (2025) examined healthcare project performance within public–private partnerships and reported a negative contract-management coefficient ($\beta = -2.043$, $p = .032$). Its interpretation depends on the original predictor coding, outcome definition and model specification. A negative adjusted coefficient does not establish that flexibility improves performance or that stronger contracting necessarily reduces it. The study is relevant as evidence from a different contractual setting, rather than as a directly comparable estimate for recurring medicine supply.

Pharmaceutical contracts must connect purchasing requirements with product standards. The Kenya Essential Medicines List identifies priority products, while WHO guidance addresses pharmaceutical quality assurance (Ministry of Health, 2023b; WHO, 2024c). These requirements can inform specifications for product identity, packaging, documentation, handling and acceptance. Consequently, timely delivery should be interpreted alongside the usability and conformity of the products received.

Mugwiria and Osoro (2024) examined contract management practices and procurement performance in Nairobi public health facilities. Their procurement outcome differs from the broader hospital performance considered by Muuki and Nderui (2024). Together, the studies establish relevant organisational context, but they do not directly measure the same service-delivery composite used here. This distinction supports a focused assessment of contracting-related perceptions without treating different outcomes as equivalent.

2.2.2 Supplier Compliance, Capacity and Procurement Performance

Supplier certification and operational readiness are relevant to pharmaceutical fulfilment, although neither independently establishes contracting quality. Chikophe et al. (2024) examined procurement processes and essential-drug availability in Mombasa County public health facilities. Their focus links procurement arrangements with medicine availability but differs from the present adjusted analysis of contracting-related employee ratings. Accordingly, the study provides contextual support rather than direct validation of the current construct.

Onyango et al. (2024) examined experiences of essential-medicine availability in Kenya during the COVID-19 pandemic. Their qualitative evidence identifies vulnerabilities extending beyond individual supplier agreements, including financing and wider supply-chain constraints. Such findings help explain why contracting should be considered within a broader operational system. They do not establish the magnitude or direction of the contracting association estimated in this survey.

Performance measurement can connect procurement activity with service readiness. Fallahnezhad et al. (2024) reviewed hospital supply-chain performance indicators, providing a basis for considering multiple dimensions of performance. Potential measures for future contracting assessments include delivery punctuality, order fulfilment, product rejection and stock-out days. These examples are proposed operational measures and are not presented as variables collected in the current study.

Medicine access also involves affordability and sustainable availability. WHO (2024a) frames access in terms of relevant essential medicines being available and affordable over time. A favourable purchasing price alone therefore cannot establish that patients receive required treatment. Assessments of contracting should distinguish financial or procedural performance from the continuity of pharmaceutical services.

2.2.3 Supplier Contracting and Healthcare Service Delivery

Healthcare service delivery concerns the conditions under which patients obtain required care. Sustainable access to medicines is one component of this broader outcome (WHO, 2024a, 2024b). In the present study, employees rated medicine timeliness, supply-related continuity, perceived patient satisfaction, satisfaction-survey practices and treatment compliance. These responses describe institutional perceptions and should not be interpreted as direct patient testimony or independently measured clinical quality.

The reviewed studies are relevant but heterogeneous in their measures and settings. Muuki and Nderui (2024) address hospital performance, while Mwangi et al. (2025) examine healthcare partnership projects. Chikophe et al. (2024) focus on procurement processes and drug availability, whereas Onyango et al. (2024) document experiences during a major system disruption. Their combined contribution is to identify connected procurement and service concerns without establishing a uniform contracting effect.

The international literature similarly concerns different purchasing arrangements and performance questions. Pooled procurement, decentralised purchasing and hospital supply-chain indicators each illuminate part of the wider procurement environment (Parmaksiz et al., 2022; Nepomnyashchiy & Yadav, 2022; Fallahnezhad et al., 2024). These studies should therefore inform the interpretation of the present analysis rather than be presented as

independent replications. The distinction between procurement performance and perceived healthcare service delivery remains central.

2.3 Research Gap

The principal gap concerns the relationship between contracting-related employee assessments and perceived healthcare service delivery. Existing work addresses broader hospital performance, procurement processes or healthcare projects, using outcomes that differ from the present composite (Chikophe et al., 2024; Muuki & Nderui, 2024; Mwangi et al., 2025). This study examines that relationship while adjusting for supplier relationship management and strategic supplier evaluation in five selected referral hospitals. Its contribution is a context-specific adjusted association, whose interpretation remains subject to conceptual overlap among the sourcing measures.

3.0 Research Methodology

A quantitative descriptive cross-sectional survey was conducted in Nakuru Level Five Referral Hospital, Longisa Referral Hospital, Baringo County Level Five Referral Hospital, Kericho County Level Five Referral Hospital and Nanyuki Teaching and Referral Hospital. The target population comprised 630 employees with relevant managerial, procurement, supply-chain, pharmacy, administrative or clinical responsibilities. The reported planned sample was 245, determined using the Yamane finite-population approach and allocated proportionately across hospital strata, with random selection within strata. The analysis used 213 completed questionnaires, representing an 86.9% usable response yield relative to the planned sample.

Supplier contracting was measured using four five-point agreement items covering supplier logistics reliability, necessary certifications, enforcement of delivery timelines, and financial and operational capacity. These indicators capture perceived supplier assurance and delivery discipline rather than independently verified contract terms. Five items assessed perceived healthcare service delivery through medicine timeliness, supply-related return visits, patient satisfaction, satisfaction surveys and treatment compliance. Item averages summarised the descriptive results, while respondent-level composites informed the inferential analysis.

Spearman rank correlation assessed the bivariate association between supplier contracting and perceived healthcare service delivery. An ordinal logistic regression model then examined the ordered service-delivery outcome while adjusting for supplier relationship management and strategic supplier evaluation. The supplier-contracting coefficient therefore represents an association conditional on the other two sourcing composites. Statistical significance was assessed at $\alpha = .05$, with reported proportional-odds, model-fit and collinearity diagnostics considered during interpretation.

Participation was voluntary, responses were confidential and findings were reported in aggregate. The survey collected employee perceptions at one time point and did not collect direct patient satisfaction responses or independent clinical records. Consequently, the analysis is observational and cannot establish temporal or causal relationships. Measurement and institutional limitations are considered in the discussion.

4.0 Research Findings and Discussion

This section presents descriptive ratings, the bivariate correlation and the adjusted ordinal regression results. Supplier contracting is considered in relation to employee-perceived healthcare service delivery. The interpretation distinguishes descriptive patterns from inferential associations and situates the findings within the theoretical and empirical literature.

Stratford Peer Reviewed Journals and Book Publishing
Journal of Procurement & Supply Chain
Volume 10||Issue 1||Page 64-74||November ||2026|
Email: info@stratfordjournals.org ISSN: 2617-3581

4.1 Descriptive Findings on Supplier Contracting

Table 1: Descriptive Statistics for Supplier Contracting

Indicator	Mean	SD
Reliable supplier logistics for timely delivery	3.87	0.83
Possession of necessary supplier certifications	3.93	0.78
Strict enforcement of delivery timelines	3.80	0.86
Financial and operational capacity to deliver	3.89	0.81
Average of item means	3.87	—

Table 1 presents the four supplier-contracting indicators. Supplier certification had the highest mean (M = 3.93, SD = 0.78), followed by financial and operational capacity (M = 3.89, SD = 0.81), logistics reliability (M = 3.87, SD = 0.83) and delivery-timeline enforcement (M = 3.80, SD = 0.86). All means were above the numerical midpoint of the five-point scale. The 0.13-point range is descriptive and does not establish a statistically significant difference between indicators.

The average of the four published item means was 3.87. This summary should be distinguished from a respondent-level composite mean with an independently calculated standard deviation. Delivery-timeline enforcement was the lowest-rated item, making it a reasonable area for managerial review. However, the descriptive ranking alone does not demonstrate an operational gap between supplier credentials and actual delivery performance.

4.2 Descriptive Findings on Quality Healthcare Service Delivery

Table 2: Descriptive Statistics for Quality Healthcare Service Delivery

Indicator	Mean	SD
Patients receive medication within set timelines	4.04	0.77
Reliable drug supply supports patient return visits	4.04	0.79
Patients are generally satisfied with services	4.07	0.74
Patient satisfaction surveys are regularly conducted	3.90	0.81
Drug availability supports treatment compliance	4.11	0.71
Average of item means	4.03	—

Table 2 summarises employee ratings of healthcare service delivery. Drug availability supporting treatment compliance received the highest mean (M = 4.11, SD = 0.71), followed by perceived patient satisfaction (M = 4.07, SD = 0.74). Medicine timeliness and supply-related patient return visits both averaged 4.04, while conducting satisfaction surveys had the lowest mean (M = 3.90, SD = 0.81). These are descriptive comparisons rather than tests of differences between indicators.

The average of the five item means was 4.03, indicating favourable overall employee assessments. The items nevertheless encompass different aspects of service delivery, including perceived outcomes and the administrative practice of conducting satisfaction surveys. Their breadth should be recognised when interpreting the composite. The results do not independently establish patient satisfaction, medicine availability or treatment adherence.

4.3 Correlation Analysis

Table 3 reports a positive Spearman rank correlation between supplier contracting and perceived healthcare service delivery ($\rho = .40$, $p < .001$). Higher contracting ratings were therefore associated with higher service-delivery ratings. The magnitude indicates a moderate

Stratford Peer Reviewed Journals and Book Publishing
Journal of Procurement & Supply Chain
Volume 10||Issue 1||Page 64-74||November ||2026|
Email: info@stratfordjournals.org ISSN: 2617-3581

monotonic relationship. This bivariate result does not account for the other sourcing composites.

Table 3: Association Between Supplier Contracting and Healthcare Service Delivery

Relationship	Spearman ρ	p-value
Supplier contracting ↔ healthcare service delivery	0.40	< .001

The coefficient does not mean that contracting explains 40% of service quality. It identifies an association between respondent-level ratings, without establishing the direction of influence. The pattern is compatible with the accountability mechanisms described by agency theory (Jensen & Meckling, 1976). Shared respondent perspectives and overlapping medicine-supply content provide alternative explanations that must also be considered.

4.4 Ordinal Logistic Regression Analysis

Table 4: Selected Ordinal Logistic Regression Diagnostics

Diagnostic	Reported value	Interpretation
Test of parallel lines	$\chi^2 = 5.52$; df = 6; p = .48	No evidence against proportional odds
Pearson goodness of fit	$\chi^2 = 221.37$; df = 230; p = .62	No detected lack of fit
Deviance goodness of fit	$\chi^2 = 218.54$; df = 230; p = .71	No detected lack of fit
Supplier contracting VIF	1.94	No serious multicollinearity
Overall model improvement	$\chi^2(3) = 41.85$; p < .001	Predictors improve fit
Nagelkerke pseudo-R^2	0.56	Relative model fit index

Table 4 presents the diagnostics reported in the source manuscript. The parallel-lines test was reported as non-significant, and the Pearson and deviance tests were reported as showing no detected lack of fit. The contracting VIF was 1.94, although this single value does not describe collinearity across the complete predictor set. Nagelkerke pseudo-R^2 is a relative fit measure and should not be interpreted as the proportion of outcome variance explained in ordinary least-squares regression.

Table 5: Adjusted Association Between Supplier Contracting and Healthcare Service Delivery

Predictor	B	SE	p	OR	Approx. 95% CI (OR)
Supplier contracting	0.230	0.08	.007	1.259	1.076–1.472

Table 5 reports a positive adjusted supplier-contracting coefficient (B = 0.230, reported p = .007), with an odds ratio of 1.259 and an approximate 95% interval of 1.076–1.472. Under the higher-category interpretation used in the source manuscript, this corresponds to 25.9% higher odds per one-unit increase in the contracting composite, holding the two other sourcing composites constant. It does not represent a 25.9% increase in probability or an improvement in clinical outcomes. At the reported significance level, the null hypothesis was rejected.

The adjusted result concerns the measured contracting composite as a whole. It does not identify separate effects for certification, logistics, delivery enforcement or supplier capacity. Likewise, the outcome reflects employee perceptions rather than patient-level outcomes or audited stock records. The association should therefore be interpreted within the scope of these measurements.

The descriptive and regression findings answer different questions. Item means indicate how respondents rated particular features, whereas the regression coefficient concerns the conditional association of the overall composite. The lower mean for delivery enforcement cannot be used to infer that this item drives the adjusted association. Separating these interpretations avoids extending the findings beyond the analysis performed.

4.5 Discussion of Findings

Supplier contracting retained a positive reported association with perceived healthcare service delivery after adjustment for supplier relationship management and strategic supplier evaluation. This finding concerns the contracting composite conditional on the two other sourcing measures. It does not establish how much of the outcome is attributable to each sourcing practice or identify a distinct causal mechanism. Conceptual overlap among the constructs remains relevant to interpreting the result.

The direction of the association is consistent with the positive contracting-related finding reported by Muuki and Nderui (2024). However, their hospital-performance outcome differs from the service-delivery composite examined here. Agreement in direction therefore provides contextual consistency rather than direct replication. Neither comparison establishes that changing contract arrangements reduces stock-outs or improves patient health.

The negative coefficient reported by Mwangi et al. (2025) should be interpreted within its healthcare partnership setting. Differences in contractual arrangements, outcome definitions and coding limit direct comparison with recurring pharmaceutical supply. Its sign does not, by itself, demonstrate a flexibility mechanism or explain the positive association observed here. The relevant implication is that findings from different contracting settings require careful qualification.

Agency theory offers a plausible interpretation of the relationship between supplier assurance and delivery accountability. Certification and capacity checks concern the information available before award, while delivery enforcement concerns performance during implementation (Jensen & Meckling, 1976). Institutional decoupling additionally explains why formal compliance may coexist with uneven operational practice (Meyer & Rowan, 1977). These are theoretical interpretations, since the survey did not directly test monitoring intensity, decoupling or sanctions.

Contracting also operates alongside financing, forecasting, inventory management and distribution. Onyango et al. (2024) document medicine-supply vulnerabilities that extend beyond individual hospital agreements. These conditions may influence whether contractual commitments translate into usable medicines. The present association therefore supports attention to contracting within a wider supply system, rather than treating it as a sufficient explanation of service delivery.

The study's contribution is a more bounded account of contracting-related employee perceptions. Supplier characteristics are relevant when translated into eligibility requirements and verifiable delivery expectations, but supplier capability is not identical to contract administration. Similarly, the measured service-delivery composite includes perceptions of medicine-related continuity and broader satisfaction practices. Recognising these boundaries strengthens the interpretation without claiming that individual clauses or remedies were evaluated.

4.6 Limitations of the Study

The cross-sectional design limits temporal ordering and causal interpretation. Both constructs were rated by employees, creating potential shared-source bias and overlap between medicine-supply content in the predictor and outcome. Responses were also nested within five hospitals,

so institutional differences may contribute to the observed association. These limitations restrict generalisation beyond the selected facilities.

The sampling and measurement boundaries further qualify the findings. The 86.9% usable yield does not independently establish that nonresponse bias was absent. The broad outcome combines perceived service experiences with satisfaction-survey practices, and the analysis lacks direct patient or stock-record validation. Accordingly, the findings describe employee-reported organisational conditions rather than verified clinical performance.

Future research should connect supplier-contract information with independently recorded delivery and service indicators. Order fulfilment, stock-out days and patient-reported experiences could help distinguish procurement processes from their downstream outcomes. A longitudinal design could also establish whether changes in contracting precede changes in supply reliability. Such evidence would provide a stronger basis for evaluating the proposed operational mechanisms.

5.0 Conclusion

Supplier contracting was positively associated with perceived healthcare service delivery in the selected referral hospitals. The reported relationship remained statistically significant after adjustment for supplier relationship management and strategic supplier evaluation. Descriptive ratings were favourable, although differences between individual contracting indicators were small and were not tested inferentially. The study contributes evidence on employee-perceived organisational associations, without establishing causation, the effectiveness of specific contract clauses or improvements in clinical outcomes.

6.0 Recommendations

Hospital procurement managers should review delivery-timeline enforcement, which had the lowest descriptive contracting mean. Practical measures could include agreed lead times, documented delivery reviews and clear escalation responsibilities linking procurement and pharmacy teams. These proposals respond to the descriptive pattern and reported composite association. Their effectiveness was not tested in this study.

County health authorities and hospital management should support clear accountability for pharmaceutical delivery and align procurement planning with available resources. Supplier qualification checks should be connected to documented product acceptance and delivery requirements. These policy proposals recognise that contracting operates within wider financing and supply systems. Implementation should follow applicable procurement procedures and local operational needs.

Future research should test whether these proposed practices improve independently measured supply and service outcomes. Contract audits, order-level records, stock-out indicators and patient-reported experiences would provide complementary evidence. Repeated observations across a larger hospital sample would help assess temporal relationships and institutional variation. Such work should also distinguish supplier capacity from contract administration and validate the service-delivery construct.

References

Chikophe, R. M., Tenambergen, W. M., & Kyalo, C. K. (2024). Influence of procurement process on availability of essential drugs in public health facilities in Mombasa County, Kenya. *International Journal of Health Sciences, 7* (3), 44–56.

DiMaggio, P. J., & Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review, 48* (2), 147–160.

Fallahnezhad, M., Langarizadeh, M., & Vahabzadeh, A. (2024). Key performance indicators of hospital supply chain: A systematic review. *BMC Health Services Research, 24*, Article 1610.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics, 3* (4), 305–360.

Meyer, J. W., & Rowan, B. (1977). Institutionalized organizations: Formal structure as myth and ceremony. *American Journal of Sociology, 83* (2), 340–363.

Ministry of Health. (2023a). *Kenya health facility census report*. Government of Kenya.

Ministry of Health. (2023b). *Kenya essential medicines list 2023*. Government of Kenya.

Ministry of Health. (2024, March 13). *Bridging the health products gaps for universal health coverage*. Government of Kenya.

Mugwiria, J. M., & Osoro, A. (2024). Contract management practices and procurement performance of public health facilities in Nairobi City County, Kenya. *International Journal of Social Sciences Management and Entrepreneurship, 8* (4).

Muuki, A. K., & Nderui, D. N. (2024). Supplier sourcing and performance of public Level 5 hospitals in Nairobi City County, Kenya. *International Journal of Social Sciences Management and Entrepreneurship, 8* (3), 680–696.

Mwangi, S. W., Sang, P. K., & Gachengo, L. W. (2025). Effect of contract management processes within public-private partnerships on the performance of healthcare projects in public hospitals in selected counties in Kenya. *International Journal of Business Management, Entrepreneurship and Innovation, 7* (1), 103–117.

Nepomnyashchiy, L., & Yadav, P. (2022). *Decentralized purchasing of essential medicines and its impact on availability, prices, and quality: A review of current evidence*. Center for Global Development.

Onyango, J. O., Ogira, D., & Kokwaro, G. (2024). Availability of essential medicines during the COVID-19 pandemic: A qualitative study examining experiences and level of preparedness in Kenya. *PLOS Global Public Health, 4* (7), e0002547.

Parmaksiz, K., Pisani, E., Bal, R., & Kok, M. O. (2022). A systematic review of pooled procurement of medicines and vaccines: Identifying elements of success. *Globalization and Health, 18*, Article 59.

World Health Organization. (2023). *Access to NCD medicines: Emergent issues during the COVID-19 pandemic and key structural factors*.

World Health Organization. (2024a). *Access to essential medicines: Proportion of health facilities that have a core set of relevant essential medicines available and affordable on a sustainable basis*.

World Health Organization. (2024b). *WHO results report 2022–2023: Improved access to essential medicines, vaccines, diagnostics and devices for primary health care*.

World Health Organization. (2024c). *Quality assurance of pharmaceuticals: A compendium of guidelines and related materials* (10th ed., Vol. 1).

World Health Organization. (2024d). *World health statistics 2024: Monitoring health for the SDGs, Sustainable Development Goals*.

World Health Organization. (2026). *Procurement: Quality assurance*.

World Health Organization Regional Office for Africa. (2024). *2024 Kenya health facility assessment: Quality of care and human resources for health report*.