Designing a Performance Evaluation Framework for Sales Representatives in the Nigerian Medical and Pharmaceutical Sector

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ABSTRACT

Sales representatives are vital intermediaries between pharmaceutical companies and healthcare institutions, particularly in resource-constrained health systems such as Nigeria's. However, the lack of a standardized, context-specific performance evaluation framework undermines productivity, accountability, and ethical compliance in pharmaceutical sales. This paper proposes a comprehensive performance evaluation framework tailored to the Nigerian medical and pharmaceutical sector, integrating metrics related to sales volume, regulatory compliance, ethical engagement, and stakeholder feedback. Drawing on an extensive review of local and international literature, field surveys, and expert interviews, the study applies a multi-criteria decision analysis (MCDA) approach, embedded within a modified balanced scorecard model. Empirical validation was conducted across six states using structural equation modeling (SEM), with statistically significant relationships observed between performance dimensions and outcomes such as customer satisfaction, market share growth, and regulatory compliance. The proposed framework enhances transparency, fosters ethical conduct, and supports long-term sustainability in pharmaceutical sales and distribution. Recommendations are made for national implementation, capacity building, and digital tool integration.

Keywords : Sales performance, pharmaceutical sector, evaluation framework, Nigeria, ethical compliance, stakeholder feedback

1. Introduction

The pharmaceutical sector in Nigeria plays a crucial role in ensuring access to essential medicines, promoting public health outcomes, and sustaining healthcare delivery systems. Within this sector, sales representatives

serve as frontline actors who bridge the gap between pharmaceutical companies and healthcare providers. Their activities encompass product promotion, order acquisition, relationship management, and regulatory liaison. However, despite their pivotal role, the performance evaluation of sales representatives often lacks structure, standardization, and contextual relevance. Most existing evaluation models are imported from Western contexts and do not adequately reflect the unique socio-economic, cultural, and regulatory environment of Nigeria [1], [2].

The absence of a robust performance evaluation framework has led to several challenges. These include misaligned incentives, unethical marketing practices, non-compliance with regulatory norms, and suboptimal engagement with healthcare stakeholders [3], [4]. Moreover, the growing complexity of Nigeria's pharmaceutical market driven by increasing competition, fragmented supply chains, and evolving health policies necessitates a more comprehensive and locally adapted approach to performance assessment [5], [6].

A performance evaluation framework is not merely a managerial tool but a strategic enabler of organizational efficiency, ethical integrity, and market competitiveness. In the pharmaceutical industry, such frameworks must strike a balance between quantitative metrics (e.g., sales volume, revenue growth) and qualitative indicators (e.g., customer satisfaction, compliance behavior, communication skills) [7], [8]. Additionally, there is a need to account for sector-specific variables such as drug approval timelines, regulatory inspection cycles, and the role of public procurement processes [9], [10].

Several attempts have been made globally to design performance measurement systems for pharmaceutical sales personnel. Balanced scorecards, 360-degree feedback models, and key performance indicator (KPI) dashboards have been variously deployed [11], [12]. However, these models often fall short when applied in the Nigerian context due to factors such as inadequate digital infrastructure, lack of training, and differing cultural expectations of sales conduct [13], [14]. Moreover, the dominance of informal market practices and weak regulatory enforcement further complicate the implementation of standardized performance metrics [15], [16].

The need for a stakeholder-driven, culturally sensitive, and operationally feasible performance evaluation framework is therefore urgent. Such a framework must integrate insights from sales strategy, health systems management, behavioral ethics, and local governance mechanisms [17], [18]. It should also leverage emerging technologies such as mobile data collection, cloud-based dashboards, and predictive analytics to enhance scalability and responsiveness [19], [20].

This paper aims to fill the existing gap by designing and validating a performance evaluation framework specifically tailored for sales representatives in the Nigerian medical and pharmaceutical sector. The study is grounded in a mixed-methods approach, combining qualitative insights from stakeholder interviews with quantitative data from field surveys and administrative records [21], [20]. The proposed framework is structured around four core dimensions: sales outcomes, ethical compliance, customer engagement, and stakeholder feedback. Each dimension is operationalized through a set of measurable indicators validated through statistical modeling and pilot implementation [22], [23].

The objectives of this study are threefold. First, to identify the critical performance dimensions relevant to pharmaceutical sales representatives in Nigeria. Second, to construct a multi-criteria evaluation model that reflects the realities of the local market. Third, to empirically test the framework's reliability, validity, and predictive power in real-world settings [24], [25].

By addressing these objectives, the paper contributes to both theory and practice. Theoretically, it advances the discourse on performance management in emerging health markets. Practically, it offers a policy-relevant tool for pharmaceutical companies, regulatory agencies, and public health institutions seeking to enhance accountability, motivation, and impact in sales operations [26], [27].

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2. Literature Review

Performance evaluation has evolved as a crucial component in human resource and organizational management, serving as a mechanism to align individual performance with strategic goals. In the pharmaceutical sector, performance assessment is particularly sensitive due to the ethical implications, regulatory oversight, and public health consequences associated with drug promotion and sales practices [50]. While traditional models have

emphasized quantitative metrics, contemporary literature underscores the importance of a balanced approach that also accounts for ethical behavior, stakeholder relationships, and policy compliance [51].

Globally, several frameworks have been developed to evaluate the effectiveness of pharmaceutical sales representatives. The Balanced Scorecard approach, pioneered by Kaplan and Norton, has gained traction for its multidimensional structure that includes financial, customer, internal process, and learning perspectives [52]. This model has been adapted for pharmaceutical settings in developed economies but faces contextual limitations in resource-constrained environments like Nigeria [53], [E18]. Studies indicate that performance models must consider local market dynamics, including fragmented healthcare delivery systems, varied prescriber behaviors, and socio-cultural attitudes toward pharmaceutical sales [54], [55].

Ethical considerations have become central to performance discourse. Unethical promotional practices, such as inducements to prescribers, misrepresentation of drug efficacy, and manipulation of procurement decisions, have been widely documented [56], [57]. Consequently, scholars and regulatory bodies have advocated for integrating ethical compliance indicators into performance appraisals. For instance, the World Health Organization's ethical criteria for medicinal drug promotion emphasize accuracy, transparency, and responsibility [58]. However, compliance enforcement remains weak in many low- and middle-income countries, including Nigeria [59], [60].

Sales strategy alignment is another critical dimension in performance assessment. Research suggests that aligning individual goals with corporate sales strategy enhances motivation, job satisfaction, and sales effectiveness [61]. In Nigeria, the absence of clearly communicated targets and inconsistent reward systems has hindered performance outcomes and contributed to high turnover rates among sales staff [62].

Stakeholder perspectives, especially those of healthcare providers, regulatory officials, and procurement officers, are often missing from traditional evaluations. Literature from participatory management and collaborative governance advocates for incorporating feedback from multiple stakeholders to gain a holistic view of sales representatives' performance [63]. Such a stakeholder-driven approach is particularly relevant in Nigeria, where trust in pharmaceutical representatives is often low due to historical practices of overpromotion and under-regulation [64], [65].

Technological innovations offer new avenues for improving performance evaluations. Mobile platforms and cloud-based dashboards facilitate real-time data collection, monitoring, and reporting [66]. Predictive analytics, machine learning, and business intelligence tools have been explored in recent studies to anticipate sales trends, flag unethical behaviors, and optimize territory management [67]. Despite their potential, technological adoption in Nigeria is constrained by infrastructural deficits, cost barriers, and skill gaps [68], [69].

In sum, the literature identifies four interrelated dimensions critical to performance evaluation in the pharmaceutical sector: (1) sales outcomes, (2) ethical conduct, (3) stakeholder engagement, and (4) strategic alignment. While global models offer valuable insights, there is a clear gap in locally adapted, empirically tested frameworks for the Nigerian context. This study aims to bridge that gap by constructing a performance evaluation framework informed by both global best practices and the unique realities of Nigeria's pharmaceutical ecosystem [70],[71].

3. Methodology

The methodology adopted for this study integrates both qualitative and quantitative research paradigms to develop and validate a performance evaluation framework specifically tailored to sales representatives in Nigeria's medical and pharmaceutical sector. The approach is underpinned by a mixed-methods design that facilitates the triangulation of insights, increases the robustness of findings, and enhances the applicability of the developed framework to real-world conditions [72], [73].

3.1 Research Design

The research design followed an exploratory sequential mixed-methods structure, beginning with a qualitative phase involving key informant interviews and focus group discussions. This phase was instrumental in identifying context-specific performance dimensions, capturing the lived experiences of stakeholders, and

revealing systemic gaps in current evaluation practices [74], [75]. The second, quantitative phase employed structured surveys and statistical analysis to validate the identified dimensions and develop reliable performance indicators.

3.2 Data Collection

3.2.1 Qualitative Phase

A purposive sampling technique was employed to select participants for in-depth interviews and focus group discussions. The sample comprised regulatory officials, sales managers, healthcare providers, procurement officers, and experienced sales representatives from across Nigeria. A total of 45 key informant interviews and 6 focus group discussions were conducted. Thematic analysis was used to analyze the qualitative data using NVivo software. Themes were identified across four core areas: sales effectiveness, ethical conduct, stakeholder engagement, and strategic alignment [76], [77].

3.2.2 Quantitative Phase

The quantitative phase involved a cross-sectional survey distributed to 500 sales representatives across six geopolitical zones in Nigeria. The survey instrument consisted of 40 items rated on a 5-point Likert scale. The questionnaire was pretested for content validity and reliability. Cronbach's alpha coefficients for each subscale exceeded 0.80, indicating high internal consistency [78], [79].

3.3 Framework Development

Based on the results from the qualitative phase, an initial conceptual framework was developed comprising four performance dimensions: Sales Outcomes, Ethical Compliance, Stakeholder Feedback, and Strategic Alignment. Each dimension was broken down into sub-indicators informed by the literature and stakeholder input [80], [81]. Indicators were weighted through an Analytic Hierarchy Process (AHP) based on expert evaluations [82], [83].

3.4 Statistical Validation

Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) were conducted using SPSS and AMOS software to test the factor structure of the evaluation model. EFA was used to identify latent constructs, and CFA verified the model's goodness-of-fit. Fit indices (CFI = 0.95, TLI = 0.93, RMSEA = 0.04) confirmed the structural validity of the framework. Discriminant and convergent validity were established through Average Variance Extracted (AVE) and Composite Reliability (CR) measures [84].

3.5 Pilot Implementation

A pilot implementation was conducted in three pharmaceutical firms operating in Lagos, Abuja, and Kano. The framework was applied over a three-month period, with real-time data collection on selected KPIs. Managers and field supervisors used mobile dashboards to track sales performance, ethical infractions, and client feedback. Results from the pilot informed refinements to the framework, especially the weighting and operationalization of ethical and stakeholder-related indicators [85].

3.6 Ethical Considerations

Ethical approval was obtained from the National Health Research Ethics Committee (NHREC) of Nigeria. All participants provided informed consent. Anonymity and confidentiality were assured throughout the study. Data were securely stored and used solely for academic and policy-related purposes [86].

3.7 Limitations

This methodology is not without limitations. First, self-report bias may have influenced responses during the survey. Second, the sample may not fully represent all market segments, especially rural or underserved areas. Third, the reliance on digital tools in the pilot phase may exclude firms with limited technological capacity. Nevertheless, these limitations are acknowledged and mitigated through triangulation and continuous stakeholder engagement [87].

Overall, this methodology ensures that the proposed performance evaluation framework is contextually grounded, empirically validated, and practically applicable. It lays a strong foundation for scalable adoption

across Nigeria's pharmaceutical sector while contributing to the broader discourse on ethical, stakeholder-responsive performance management in healthcare sales [88].

4. Results

The results of this study provide empirical validation for the proposed performance evaluation framework for sales representatives in Nigeria's medical and pharmaceutical sector. Insights from the pilot implementation and statistical analysis yielded significant findings that affirm the framework's structural soundness, contextual relevance, and practical applicability.

4.1 Demographic Characteristics of Respondents

The cross-sectional survey phase involved 500 sales representatives, with a response rate of 86%. Of the 430 completed surveys, 60% of respondents were male and 40% female. A significant proportion (54%) had more than five years of experience in the pharmaceutical sales industry, and 72% held at least a bachelor's degree in science-related fields. The distribution across Nigeria's six geopolitical zones was balanced, enhancing representativeness [89], [90].

4.2 Validation of Performance Dimensions

The Exploratory Factor Analysis (EFA) yielded four dominant factors explaining 72% of the total variance: Sales Outcomes (28%), Ethical Compliance (18%), Stakeholder Feedback (15%), and Strategic Alignment (11%). These factors were consistent with the conceptual framework developed during the qualitative phase. All items exhibited factor loadings above 0.60, and no significant cross-loadings were observed [91], [92].

4.3 Confirmatory Factor Analysis (CFA) Results

CFA further confirmed the construct validity of the model. Fit indices were within acceptable thresholds (χ^2/df = 1.89, CFI = 0.95, TLI = 0.93, RMSEA = 0.04). All measurement items loaded significantly on their respective constructs, and AVE values exceeded the 0.50 benchmark for convergent validity. Composite Reliability values ranged from 0.84 to 0.91, indicating high internal consistency [93].

4.4 Pilot Implementation Outcomes

During the three-month pilot in Lagos, Abuja, and Kano, the framework was used to evaluate the performance of 85 sales representatives. Real-time dashboards captured weekly updates on four performance categories. Key findings include:

- Sales Outcomes improved by an average of 11% across firms.

- Ethical compliance incidents decreased by 18%.

- Stakeholder satisfaction (measured through client feedback surveys) increased by 22%.

- Strategic alignment, assessed through monthly manager reviews, demonstrated marked improvement in planning coherence and policy adherence [94].

4.5 Correlation and Regression Analysis

Pearson correlation coefficients revealed significant positive relationships among all four performance dimensions. Sales Outcomes were strongly correlated with Stakeholder Feedback (r = 0.71, p < 0.01) and Strategic Alignment (r = 0.68, p < 0.01). Multiple regression analysis indicated that Ethical Compliance and Stakeholder Feedback were significant predictors of Sales Outcomes (β = 0.37 and β = 0.44, respectively, p < 0.01) [95].

4.6 Framework Usability and Stakeholder Feedback

Qualitative feedback from firm managers and supervisors highlighted the framework's clarity, ease of use, and adaptability to operational workflows. Stakeholders appreciated the integration of ethics and strategic alignment as core evaluative dimensions, citing their impact on reputational capital and long-term client trust. Adjustments were made to indicator weightings based on user feedback and regional variations [96].

4.7 Summary of Key Metrics

Dimension	Baseline (%)	Endline (%)	Change (%)

Sales Outcomes	64	75	+11
Ethical Compliance	82	96	+14
Stakeholder Feedback	58	80	+22
Strategic Alignment	60	76	+16

4.8 Insights for Framework Scaling

The results suggest that the framework can be adapted for broader adoption across public and private sector pharmaceutical firms. The integration of digital reporting tools, automated dashboards, and periodic feedback loops makes the framework scalable and responsive to diverse contexts. However, future implementations should address infrastructural disparities and include localized performance benchmarks [97], [98].

Collectively, these results validate the framework's robustness and highlight its potential to transform performance evaluation practices in Nigeria's pharmaceutical sales landscape.

5. Discussion

The discussion interprets the empirical findings within the broader context of pharmaceutical sales performance management, focusing on theoretical validation, practical implications, and strategic insights. The multidimensional framework encompassing Sales Outcomes, Ethical Compliance, Stakeholder Feedback, and Strategic Alignment presents a novel contribution to the Nigerian pharmaceutical sales ecosystem.

5.1 Theoretical Implications of the Framework

The integration of ethical compliance and stakeholder engagement into performance evaluation addresses a longstanding gap in existing sales performance literature. Traditional metrics predominantly emphasized sales volume, overlooking qualitative and compliance dimensions. By incorporating these additional axes, the framework aligns with contemporary organizational behavior theories that stress integrity, reputation, and relational capital. This theoretical integration enables a more holistic understanding of performance that transcends transactional efficiency [99].

The positive intercorrelations among the four dimensions (Sales Outcomes, Ethical Compliance, Stakeholder Feedback, and Strategic Alignment) further validate the theoretical coherence of the model. These results align with stakeholder theory and value-based selling models, indicating that ethically sound and strategically aligned sales practices positively impact overall business outcomes [100].

5.2 Practical Implications for Sales Managers and Organizations

The framework's real-world usability during the pilot phase demonstrates its operational viability. Sales managers appreciated the dashboard interface and streamlined performance tracking. The clear metrics empowered managers to provide timely feedback and structure performance improvement plans [101].

Additionally, firms reported improved customer retention and compliance with public health regulations during the pilot. These outcomes signal a paradigm shift toward ethics-driven sales cultures, which are particularly crucial in the public health context where trust and transparency are paramount [102].

The improvement in stakeholder feedback and strategic alignment also indicates that frontline sales representatives are more attuned to organizational goals and client expectations. These developments support capacity-building and long-term competitive advantage [103].

5.3 Addressing Regional and Operational Variability

While the pilot implementation covered Nigeria's three major commercial hubs, stakeholder feedback revealed that regional disparities in infrastructure, digital literacy, and managerial oversight must be addressed during national rollout. Firms operating in less urbanized regions may require tailored onboarding and localized training modules to fully benefit from the framework.

The weighting of performance dimensions may also need contextual adjustment. For example, in regions where regulatory oversight is weaker, emphasizing ethical compliance may have a more substantial developmental impact than sales volume metrics alone.

5.4 Framework Scalability and Digital Transformation

The integration of digital reporting tools positions the framework for scalability across diverse organizational settings. The results demonstrate that automated dashboards and real-time analytics not only streamline data collection but also facilitate proactive decision-making.

However, the success of digital integration depends on infrastructure and user competence. Organizations must invest in training and IT support to fully leverage the technological components of the framework. Moreover, harmonizing digital tools with national health information systems could enhance data consistency and regulatory compliance [104].

5.5 Strategic Alignment and Organizational Learning

The findings show that strategic alignment is not just a managerial priority but a measurable and improvable component of individual performance. Representatives who understood their firm's long-term objectives and policies were more likely to comply with ethical guidelines and deliver higher stakeholder satisfaction [105].

Organizational learning mechanisms such as monthly reviews, peer assessments, and mentorship played a pivotal role in reinforcing strategic goals. This supports literature advocating for continuous learning as a core aspect of salesforce effectiveness.

5.6 Ethical Implications and Governance

The decrease in ethical compliance incidents suggests that clear evaluative criteria and accountability structures promote better behavior. Ethical governance mechanisms like incident reporting and ethical performance scoring can now be institutionalized through the framework.

This also has regulatory implications. Public health institutions and pharmaceutical regulators can adopt elements of this framework to enhance oversight of sales activities, particularly where public-private interactions are frequent.

5.7 Limitations and Future Research Directions

While the study covered a broad sample and achieved high statistical reliability, several limitations remain. First, the pilot was limited to three urban centers, potentially limiting generalizability. Second, the self-reported nature of survey responses may introduce bias despite anonymity assurances.

Future research should explore longitudinal adoption of the framework, its integration with CRM platforms, and its effectiveness across other healthcare verticals such as diagnostics or medical devices. Comparative studies between public and private sector implementation can also provide deeper insights.

5.8 Summary

The framework's multidimensional structure aligns with both academic theories and operational needs. The positive empirical results confirm that sales performance can be ethically governed, strategically aligned, and digitally monitored without sacrificing commercial success. This positions the Nigerian pharmaceutical sector as a potential model for other developing healthcare markets undergoing similar transformation.

6. Conclusion

The research presented in this study offers a pioneering performance evaluation framework tailored to the Nigerian medical and pharmaceutical sector, integrating four critical dimensions: Sales Outcomes, Ethical Compliance, Stakeholder Feedback, and Strategic Alignment. Developed through iterative literature synthesis, stakeholder consultations, and empirical validation, the framework addresses both the operational shortcomings and ethical challenges traditionally observed in pharmaceutical sales performance assessments. Its implementation provides a robust mechanism for monitoring, guiding, and improving the work of medical representatives in ways that balance commercial objectives with public health imperatives.

6.1 Synthesis of Contributions

This study contributes significantly to both theoretical and practical discourse in healthcare sales management. At the theoretical level, the research expands the traditional understanding of performance evaluation beyond transactional outputs, incorporating ethical and strategic elements often overlooked in developing country contexts. The result is a multi-criteria framework that aligns with modern principles of stakeholder theory, value-based selling, and corporate governance.

From a practical standpoint, the framework equips sales managers and organizations with tools to ensure that performance metrics reflect not only financial returns but also behavioral integrity, client satisfaction, and strategic congruence. This supports more holistic human resource development, organizational learning, and customer relationship management.

6.2 Key Findings

The empirical implementation of the framework yielded several noteworthy results. First, the pilot showed that sales representatives who were evaluated across multiple dimensions demonstrated improved compliance behaviors, increased stakeholder trust, and better alignment with long-term company strategies. The correlation among the dimensions indicates a reinforcing loop: ethical compliance, for instance, was positively linked with stakeholder satisfaction and strategic alignment.

Secondly, feedback from sales managers revealed high levels of usability, especially with the digital dashboard interface developed to facilitate the framework. The accessibility and transparency provided by this digital tool allowed for real-time feedback, fostering a culture of continuous performance improvement and ethical awareness.

Third, regional variation in infrastructure, supervision, and regulatory enforcement emerged as a critical consideration. While the framework proved scalable in urban areas, rural deployment will require adaptations, including localized training and simplified digital tools to ensure equity in performance assessment.

6.3 Strategic and Ethical Implications

The successful inclusion of ethical compliance as a core evaluative dimension marks a major step forward in bridging the gap between business practices and public health values. Ethical transgressions in pharmaceutical sales such as inducements, misinformation, or breach of procurement guidelines have long plagued the industry, undermining public trust and harming patient outcomes [106]. By making ethical behavior an explicit metric tied to career progression and incentive systems, the framework reinforces corporate responsibility and regulatory adherence.

Additionally, the framework enhances the strategic adaptability of sales operations. Representatives who understand and internalize their firm's strategic objectives are more likely to deliver customer-centric solutions, engage constructively with stakeholders, and respond dynamically to market changes [107]. This is crucial in a rapidly evolving healthcare landscape where policy shifts, new product rollouts, and competitive pressures demand agility and foresight.

6.4 Sectoral Impact and Policy Relevance

The broader implications of this framework extend beyond individual firms to the public health system as a whole. By ensuring that pharmaceutical representatives are evaluated not only by volume sold but also by the manner of engagement and alignment with public health goals, the framework contributes to more transparent and accountable drug supply chains. This is especially pertinent in public-private engagements where misaligned incentives can lead to corruption or inefficiencies in medicine distribution.

Regulatory agencies, such as Nigeria's National Agency for Food and Drug Administration and Control (NAFDAC), can leverage the framework to develop standardized evaluation metrics for representatives operating in the public health sector. Pharmaceutical associations and professional boards could also incorporate elements of the framework into certification requirements and ethical guidelines [108].

6.5 Challenges Encountered

Despite the framework's promising outcomes, certain challenges persist. The reliance on self-reported data for stakeholder feedback introduces potential biases. While anonymized collection helps mitigate this risk, supplementary third-party audits or observational methods could enhance data credibility in future implementations [109].

Another challenge lies in the heterogeneity of sales team competencies, technological readiness, and managerial culture across different firms. Some organizations may resist the added transparency or perceive the ethical

compliance metrics as intrusive. Hence, change management strategies, including sensitization workshops and phased rollouts, are critical for sector-wide adoption.

6.6 Future Research Directions

This study opens several avenues for future research. First, longitudinal studies can assess the sustainability and long-term impact of the framework on sales effectiveness and organizational culture. Second, cross-sectoral comparisons involving diagnostics, surgical equipment, or over-the-counter drug markets can shed light on the framework's transferability.

Third, integration with enterprise CRM platforms and data warehousing systems will enhance the automation and scalability of the evaluation process. This calls for interdisciplinary collaboration between health informatics, business intelligence, and pharmaceutical sales research.

Fourth, comparative analysis between public and private sector implementation can reveal structural differences that affect performance and ethical behavior. Such insights could inform customized policy guidelines or incentive schemes [110].

6.7 Conclusion

In summary, this research successfully demonstrates the viability and relevance of a multidimensional performance evaluation framework for pharmaceutical sales representatives operating in the Nigerian context. By incorporating ethical compliance, stakeholder feedback, and strategic alignment alongside conventional sales metrics, the framework ensures a more responsible, inclusive, and effective sales force. Its empirical validation provides a model for other developing countries aiming to enhance pharmaceutical governance through ethically grounded performance management.

Ultimately, ethical marketing and compliance in pharmaceutical sales are not merely aspirational values but practical necessities. This framework enables institutions to embody these values in measurable, enforceable, and adaptable ways. With continued refinement and collaboration across industry, academia, and policy, the framework has the potential to transform the professionalization of pharmaceutical sales and contribute meaningfully to the broader goal of health systems strengthening in sub-Saharan Africa and beyond [111], [112].

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