EdinBurg Peer-Reviewed Journals and Books Publishers
Journal of Medicine, Nursing and Public Health
Vol. 6||Issue 8||pp 16-28||September||2026
Email: info@edinburgjournals.org||ISSN: 3105-3394

# Determinants of Health Worker Adherence to National Diarrhoea Management Guidelines for Under-Five Children in Public Health Facilities in Embakasi Region, Nairobi County

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**Accepted: 09 July 2026 || Published: 02 September 2026**

## Abstract

Diarrheal diseases remain a leading cause of morbidity and mortality among children under five years in Kenya. To combat this, national diarrhoea management guidelines were established; however, inconsistent adherence by healthcare workers often leads to preventable complications, prolonged illness, and avoidable child deaths. This study assessed the factors influencing health workers' adherence to these national guidelines in public health facilities in the Embakasi Region of Nairobi County, specifically examining the impact of sociodemographic, individual, facility-level, and managerial support factors. Adopting a positivist philosophy and a descriptive cross-sectional design, the study targeted 436 healthcare workers across 22 public facilities. A sample of 228 participants was selected using proportionate stratified random sampling. The study achieved a response rate of 93.9%. was 81.2%. Adherence was highest in dehydration assessment (89.3%) and oral rehydration salts (ORS) and zinc prescription (91.6%), while lower adherence was observed in caregiver counselling (78.5%) and documentation practices (73.8%). The study concludes that adherence to the National Diarrhoea Management Guidelines among healthcare workers in Embakasi Region public health facilities is generally high but remains influenced by healthcare worker capacity, availability of essential commodities, workload, and management support. The study recommends strengthening continuous professional development through IMCI training, ensuring uninterrupted availability of diarrhoea management commodities, enhancing supportive supervision, improving access to clinical guidelines, and addressing health worker workload to promote consistent delivery of quality diarrhoea care among under-five children.

**Keywords:** *Health Worker Adherence, Diarrhoea Prevalence, Management guidelines*

**How to Cite:** Wanjiku, M. J., Muiruri, L., & Musyoka, F. (2026). Determinants of Health Worker Adherence to National Diarrhoea Management Guidelines for Under-Five Children in Public Health Facilities in Embakasi Region, Nairobi County. *Journal of Medicine, Nursing and Public Health, 6*(8), 16-28.

## 1. Introduction

According to the World Health Organization (2020) Health Systems Framework, the delivery of quality healthcare depends on six interrelated building blocks: service delivery, health workforce, health information systems, medical products and technologies, financing, and leadership and governance. These components collectively determine health workers' ability to consistently implement evidence-based clinical guidelines. While national policies may

provide clear clinical guidance, successful implementation ultimately depends on frontline health workers' ability to translate these recommendations into routine practice.

Globally, diarrhoeal disease remains a major contributor to childhood illness and mortality despite the availability of proven preventive and treatment interventions. Research demonstrates that prompt and appropriate management substantially reduces complications associated with diarrhoea among children under five years of age (Coe et al., 2025). Nevertheless, implementation of recommended treatment protocols remains inconsistent across many low- and middle-income countries. The World Health Organization (2021) and UNICEF (2023) emphasize that widespread implementation of evidence-based interventions, including appropriate assessment, oral rehydration solution (ORS), zinc supplementation, continued feeding, and caregiver counselling, could substantially reduce diarrhoea-related morbidity and mortality among children under five years. However, findings from large multi-country investigations, including the Global Enteric Multisite Study (GEMS) and Vaccine Impact on Diarrhoea in Africa (VIDA), indicate that a considerable proportion of children with diarrhoeal illness continue to receive care that does not fully comply with recommended standards, highlighting persistent gaps in adherence to clinical guidelines in low- and middle-income countries (Deichsel et al., 2023).

Within Kenya, diarrhoeal diseases continue to place a substantial burden on child health. Ministry of Health reports indicate that approximately 10,000 under-five deaths are associated with diarrhoeal illness annually (MoH, 2022). Data from the Kenya Demographic and Health Survey reveal persistent disease prevalence, particularly in urban informal settlements where environmental and socioeconomic conditions increase vulnerability to infection (KNBS, 2023). Factors such as overcrowding, inadequate sanitation, and constrained access to quality healthcare contribute to the persistence of diarrhoeal morbidity within these communities.

According to Nairobi County health reports, diarrhoeal diseases remain among the leading causes of outpatient attendance among children under five years. Several studies have demonstrated that training interventions improve provider compliance with childhood illness management protocols (Gicheha, 2023; Coe et al., 2025). However, evidence suggests that gains from training are often difficult to sustain in environments characterized by staffing shortages, commodity stock-outs, weak supervision systems, and rising service demand. Such challenges are frequently observed in urban public health facilities where health workers operate under significant workload pressures (Coe et al., 2025).

Embakasi Region hosts a rapidly growing population characterized by high-density informal settlements, where sanitation challenges and overcrowding contribute significantly to the transmission of diarrhoeal diseases among children under five years. This population is served primarily by public health facilities. Health providers additionally encounter challenges related to inadequate infrastructure, overcrowding, limited counselling space, shortages of essential commodities, and insufficient staffing levels. These conditions may hinder consistent implementation of Integrated Management of Childhood Illness (IMCI) recommendations and ultimately affect quality of care delivered to children presenting with diarrhoeal illness.

Given the continuing burden of childhood diarrhoea and the importance of adherence to treatment guidelines, there is a need to better understand the factors determining health worker compliance within high-volume urban settings. Generating context-specific evidence will

contribute to the development of interventions to strengthen clinical practice and advance progress toward Sustainable Development Goal Three, which seeks to eliminate preventable deaths among children under five years of age.

## 2. Literature Review

### 2.1 Health Worker Adherence to National Diarrhoea Management Guidelines

Adherence to clinical guidelines refers to the extent to which health providers consistently implement recommended evidence-based interventions during patient management. In childhood diarrhoea care, adherence encompasses accurate assessment of dehydration status, correct prescription of Oral Rehydration Salts (ORS) and zinc supplementation, appropriate counselling of caregivers, rational use of antibiotics, adequate documentation, and timely referral of severe cases. The World Health Organization and Kenya Ministry of Health recommend a comprehensive approach to diarrhoea management that emphasizes prevention of dehydration, nutritional support, caregiver education, and avoidance of unnecessary medications (World Health Organization [WHO], 2019; MoH, 2022). These interventions have been shown to significantly reduce complications, hospital admissions, and mortality among under-five children.

Despite clear clinical recommendations, studies across regions indicate substantial variability in provider adherence. Research conducted across several low- and middle-income countries demonstrates that many children with diarrhoeal illness do not receive treatment carefully aligned with recommended protocols (Deichsel et al., 2023). Common deviations include failure to adequately assess dehydration, inappropriate prescription practices, incomplete counselling, and poor documentation of clinical decisions. These deficiencies compromise quality of care and contribute to avoidable complications, prolonged illness, and increased healthcare costs.

Accurate assessment of dehydration remains a critical component of diarrhoea management because treatment decisions depend largely on proper classification of dehydration severity. Studies conducted in African healthcare settings have reported inconsistencies in the application of standardized assessment procedures. In many facilities, providers rely on subjective judgment rather than structured clinical criteria, increasing the likelihood of misclassification and inappropriate treatment decisions (Marsh et al., 2021). The use of Oral Rehydration Salts and zinc supplementation constitutes the cornerstone of recommended diarrhoea treatment. ORS effectively prevents and manages dehydration, while zinc supplementation reduces the duration and recurrence of diarrhoeal episodes (UNICEF, 2023).

Despite strong evidence supporting their effectiveness, studies continue to report inconsistent utilization. In several countries, health workers have demonstrated varying levels of compliance with ORS and zinc recommendations due to factors such as limited training, prescribing habits, and commodity shortages; hence, both provider-related and managerial support-related factors determine treatment decisions. Appropriate management of diarrhoea extends beyond treatment provided within health facilities. Caregivers play a central role in ensuring continued hydration, feeding, hygiene practices, and timely recognition of danger signs. Consequently, caregiver counselling represents an essential component of guideline adherence. National guidelines recommend counselling caregivers on ORS preparation,

continued breastfeeding and feeding, recognition of dehydration danger signs, hygiene practices, and when to seek further medical attention (MoH, 2022).

Evidence indicates that patient education activities are frequently overlooked in busy outpatient departments. Time constraints, competing clinical priorities, and inadequate communication skills have been identified as major barriers to effective caregiver education. Rawas et al. (2025), in a study conducted in Nairobi informal settlements, found that inadequate counselling contributed to poor home management of diarrhoeal illness and delayed care-seeking. Similar findings in Nigeria and Ethiopia indicate that providers often prioritize prescribing medications over patient education due to workload pressures and limited consultation time (Fekadu et al., 2024). Where counselling is inadequate, caregivers may fail to implement recommended home-based practices, increasing the risk of treatment failure and disease progression.

Documentation practices are equally important in measuring adherence because they facilitate Clinical documentation supports continuity of care, quality monitoring, accountability, and evidence-based decision-making. Proper recording of patient assessment findings, prescribed treatment, counselling provided, and follow-up instructions facilitates effective management of diarrhoeal cases.

Studies conducted in Sub-Saharan African countries identified significant documentation gaps attributed to understaffing, heavy workloads, and weak monitoring systems. Poor record keeping not only compromises patient care but also limits opportunities for performance assessment and quality improvement initiatives. Incomplete records compromise patient follow-up and limit opportunities for supportive supervision and quality assurance.

Current treatment guidelines discourage routine antibiotic administration for uncomplicated acute watery diarrhoea because most episodes are viral in origin and self-limiting. Nevertheless, inappropriate antibiotic prescription remains common across many healthcare settings (World Health Organization [WHO], 2022; MoH, 2022). Research suggests that caregiver expectations, diagnostic uncertainty, and entrenched prescribing behaviours contribute to excessive antibiotic use (Johnstone et al., 2022). Such practices increase healthcare costs and accelerate antimicrobial resistance, thereby creating additional public health challenges.

Although numerous studies have examined individual aspects of adherence, relatively few investigations have comprehensively assessed multiple adherence indicators simultaneously. Additionally, much of the available evidence is drawn from rural or single-facility settings, with limited attention to densely populated urban informal settlements such as Embakasi Region. This study addressed this gap by examining adherence through several dimensions of clinical practice within a high-volume urban setting, including dehydration assessment, ORS and zinc prescription, caregiver counselling, documentation practices, and rational antibiotic use, while accounting for individual, facility-level, and managerial support determinants determining provider compliance.

### Global Perspective on Adherence

At the global level, adherence to diarrhoea management guidelines remains suboptimal. Large-scale studies such as the Global Enteric Multisite Study (GEMS) and the Vaccine Impact on Diarrhoea in Africa (VIDA) project report adherence rates below 30% in many settings (Deichsel et al., 2023; Ezezika et al., 2021). Contributing factors include inconsistent training, weak enforcement of clinical standards, and caregiver expectations that favour antibiotic treatment. Research has shown that digital health interventions may improve adherence. For example, mobile-based reminders and decision-support tools have been shown to enhance compliance with treatment protocols and increase zinc uptake among health workers in Nigeria (Kayode-Alabi et al., 2024). While these innovations show promise, there remains limited evidence on their effectiveness in high-volume, resource-constrained urban informal settlements.

### Regional Perspective: Sub-Saharan Africa

In Sub-Saharan Africa, adherence to diarrhoea management guidelines is determined by a range of structural and operational challenges. Ogumbo et al. (2024) found that only about 60% of children in Gambia, Kenya and Mali received care consistent with national treatment protocols. Commonly documented challenges relate to limited availability of ORS and zinc, inadequate supervision, poor record-keeping, and weak health infrastructure. Muhammed et al. (2025) further emphasize the role of inconsistent mentorship, irregular supervisory support, and sociocultural norms that encourage antibiotic use, even when not clinically indicated. Although regional studies provide valuable insights into barriers to adherence, many fail to examine individual health worker factors and facility-level constraints simultaneously. This limits their applicability to complex urban informal contexts, where multiple determinants interact.

### Local Perspective: Kenya and Embakasi Region

In Kenya, diarrhoeal diseases continue to pose a significant public health burden, particularly in urban informal settlements (KNBS, 2023). Findings across Kenya consistently point to interruptions in commodity availability, limited refresher training, and weak supervisory reinforcement as recurrent barriers to adherence (Kpoda et al., 2022). Additional challenges identified by Muriu (2023) include weak documentation practices, inconsistent reinforcement of guidelines during supervisory visits, and low staff morale. Gicheha (2023) highlights the positive impact of structured refresher training, mentorship, and peer learning on adherence, though implementation remains uneven across facilities. Despite these insights, few studies have systematically examined adherence within densely populated urban informal settlements such as Embakasi. This inquiry addressed this gap by analysing both individual and facility-level determinants of adherence in public health facilities within the region.

### Utilization of Diagnostic Equipment

Accurate assessment and management of childhood diarrhoea require the availability and proper use of diagnostic equipment, including thermometers, weighing scales, MUAC tapes, dehydration assessment charts, and ORT corner supplies (McLaughlin et al., 2024). In Embakasi, inadequate access to functional equipment has been associated with increased reliance on subjective clinical judgment, leading to deviations from standard guidelines

(Muriu, 2023). Orwa et al. (2023) found that facilities with adequate diagnostic tools and sanitation infrastructure demonstrated higher levels of guideline adherence and better child health outcomes. However, barriers such as poor equipment maintenance, limited user training, and unclear operational guidelines often undermine effective utilization (Adesuyi et al., 2025). Evidence suggests that routine equipment audits, supportive supervision, and continuous training can significantly improve compliance (Abu-Jeyyab et al., 2024). There remains limited empirical evidence on how equipment availability, training, and supervision interact to determine adherence in Nairobi's informal settlements.

## 3. Methodology

### 3.1 Research design

The study employed an analytical cross-sectional research design to determine the level of adherence to the National Diarrhoea Management Guidelines and to examine the association between individual-level factors, facility-level factors, managerial support factors, and adherence among health workers managing diarrhoeal diseases in children under five years in public health facilities within Embakasi Region, Nairobi City County.

The design further facilitated the collection of quantitative data from a relatively large number of health workers using standardized research instruments, including structured questionnaires, observation checklists, and facility assessment checklists. The use of standardized instruments enhanced the reliability, objectivity, and comparability of the data collected across the participating public health facilities.

### 3.2 Target Population

The target population comprised health workers directly involved in the outpatient management of diarrhoeal diseases among children under 5 years who attended public health facilities in the Embakasi Region, Nairobi City County. The study population included medical officers, clinical officers, and nurses who routinely participated in the assessment, diagnosis, treatment, caregiver counselling, documentation, and referral of children presenting with diarrhoeal diseases.

These health workers were selected because they are directly responsible for implementing the Kenya National Diarrhoea Management Guidelines and were therefore best positioned to provide information regarding adherence to the guidelines and factors determining adherence within routine clinical practice.

According to records obtained from the Nairobi City County Department of Health (March 2026), the 22 eligible public health facilities employed 436 health workers, comprising 28 medical officers, 116 clinical officers, and 292 nurses, who formed the sampling frame for the study.

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Vol. 6||Issue 8||pp 16-28||September||2026
Email: info@edinburgjournals.org||ISSN: 3105-3394

**Table 1: Sampling Matrix Showing Proportionate Allocation of the Study Sample**

| Cadre | Total Eligible Health Workers (NOs) | Proportion (%) | Sample size (n=228) |
|---|---|---|---|
| Medical Officers | 28 | 6.42% | 15 |
| Clinical Officers | 116 | 26.61% | 61 |
| Nurses | 292 | 66.97% | 152 |
| **Total** | **436** | **100%** | **228** |

Table 1 shows the proportional allocation of the final sample of 228 health workers by professional cadre. Nurses constituted the largest proportion of respondents because they represented the largest proportion of the target population, followed by clinical officers and medical officers. The use of proportionate allocation enhanced the representativeness of the sample and minimized sampling bias by ensuring that each cadre contributed respondents according to its relative size within the study population.

### 3.3 Research Instruments

Three research instruments were used to collect data for the study: a structured questionnaire, an observation checklist, and a facility assessment checklist. The instruments were developed based on the study objectives, conceptual framework, operationalization of variables, the Kenya National Diarrhoea Management Guidelines, the Integrated Management of Childhood Illness (IMCI) strategy, and relevant literature.

### 3.4 Data Analysis

Data analysis was conducted using Statistical Package for Social Sciences (SPSS) version 28. Both descriptive statistical techniques were employed to address the study objectives. Data were summarized using frequencies, percentages, means, and standard deviations where appropriate. Inferential analysis was undertaken to determine the association between the independent variables and health worker adherence to the National Diarrhoea Management Guidelines.

## 4. Results and Discussion

### 4.1 Level of Adherence to National Diarrhoea Management Guidelines Among Health Workers

This section presents findings on health worker adherence to the National Diarrhoea Management Guidelines among under-five children in public health facilities within Embakasi Region, Nairobi County. Adherence was assessed using observation checklists and client exit interviews, focusing on dehydration assessment, ORS prescription, zinc supplementation, caregiver counselling, documentation practices, and appropriate antibiotic use.

Overall, adherence was high for clinical interventions such as dehydration assessment, ORS prescription, and zinc supplementation, but comparatively lower for caregiver counselling, documentation, and appropriate antibiotic use. These findings suggest that adherence is stronger for standardized clinical procedures than for practices requiring greater clinical judgment, communication, and documentation. The observed pattern highlights the importance

of evidence-based clinical decision-making, supported by continuous training, supervision, and access to updated clinical guidelines.

### 4.1.1 Adherence to Dehydration Assessment

The study found that 191 (89.3%) health workers correctly assessed dehydration status, while 23 (10.7%) did not adhere to the recommended assessment procedures.

**Table 2: Adherence to Dehydration Assessment**

| Dehydration Assessment | Frequency | Percentage (%) |
|---|---|---|
| Adherent | 191 | 89.3 |
| Non-Adherent | 23 | 10.7 |
| **Total** | **214** | **100** |

The high level of adherence suggests that dehydration assessment is well integrated into routine diarrhoea case management and supports evidence-based clinical decision-making. The observed non-adherence may be attributed to high patient workload, limited consultation time, and staffing shortages, which can compromise the completeness of clinical assessments. In such contexts, health workers may conduct partial assessments in order to manage patient flow efficiently. Similar findings were reported by Shah et al. (2025) and Yohannes Yitbarek Wasie et al. (2024).

### 4.1.2 Adherence to ORS Prescription

The study established that 196 (91.6%) of health workers appropriately prescribed ORS, while 18 (8.4%) did not comply with guidelines.

**Table 3: Adherence to ORS Prescription**

| ORS Prescription | Frequency | Percentage (%) |
|---|---|---|
| Appropriate Prescription | 196 | 91.6 |
| Inappropriate Prescription | 18 | 8.4 |
| **Total** | **214** | **100** |

The high adherence to ORS prescription suggests that it is a well-established component of diarrhoea management, reinforced through IMCI training and the consistent availability of ORS in most facilities. Its simplicity and widespread caregiver acceptance further support routine use in clinical practice. These findings are consistent with WHO and UNICEF (2019), which reported that IMCI implementation, continuous training, and reliable availability of commodities improve adherence to ORS prescriptions. Overall, the findings indicate that sustained training and uninterrupted ORS supply are essential for maintaining high adherence to national diarrhoea management guidelines.

#### 4.1.3 Adherence to Zinc Supplementation

The study found that 180 (84.1%) of health workers correctly prescribed zinc supplementation, while 34 (15.9%) did not comply with guidelines.

**Table 4: Adherence to Zinc Supplementation**

| Zinc Supplementation | Frequency | Percentage (%) |
|---|---|---|
| Appropriate Prescription | 180 | 84.1 |
| Inappropriate Prescription | 34 | 15.9 |
| **Total** | **214** | **100** |

The relatively high adherence to zinc supplementation suggests good implementation of guideline recommendations and supports evidence-based clinical decision-making. However, the observed non-adherence may be associated with intermittent zinc stock-outs, inconsistent supportive supervision, and limited refresher training. Similar findings were reported by Walker et al. (2018), UNICEF (2020), and Mengistu et al. (2019). The findings underscore the importance of uninterrupted commodity supply, continuous training, and supportive supervision to sustain adherence to national diarrhoea management guidelines.

#### 4.1.4 Adherence to Caregiver Counselling

The study revealed that 168 (78.5%) of health workers provided adequate caregiver counselling, while 46 (21.5%) did not provide comprehensive counselling.

**Table 5: Adherence to Caregiver Counselling**

| Caregiver Counselling | Frequency | Percentage (%) |
|---|---|---|
| Adequate Counselling | 168 | 78.5 |
| Inadequate Counselling | 46 | 21.5 |
| **Total** | **214** | **100** |

The relatively lower adherence to caregiver counselling suggests that this component of diarrhoea management is more vulnerable to high patient workload, limited consultation time, and staffing constraints, as it requires effective communication and caregiver engagement. Similar findings were reported by Coe et al. (2025), UNICEF (2020), and Mirindi et al. (2024). The findings highlight the need to strengthen counselling through continuous training, structured counselling tools, and supportive supervision to promote evidence-based clinical decision-making and caregiver education.

#### 4.1.5 Adherence to Documentation Practices

The study found that 158(73.8%) of health workers appropriately documented diarrhoea case management findings and treatment interventions, while 56(26.2%) demonstrated incomplete or inadequate documentation practices. The findings indicate moderate adherence to documentation standards within the assessed facilities.

**Table 6: Adherence to Documentation Practices**

| Documentation Practices | Frequency | Percentage (%) |
|---|---|---|
| Adequate Documentation | 158 | 73.8 |
| Inadequate Documentation | 56 | 26.2 |
| **Total** | **214** | **100** |

The moderate adherence to documentation practices may be attributed to high patient workload, inadequate staffing, limited availability of standardized documentation tools, and weak supervisory oversight. These factors may reduce the completeness of clinical records and affect evidence-based clinical decision-making. Similar findings were reported by Coe et al. (2025), who identified heavy workload, documentation demands, and health system constraints as barriers to consistent guideline-adherent care in Kenyan hospitals. The World Health Organization (2021) also emphasizes the importance of complete and accurate documentation as a fundamental component of IMCI implementation, facilitating continuity of care, clinical decision-making, and quality improvement. These findings highlight the need to strengthen documentation systems, enforce documentation standards, and incorporate routine documentation audits into supportive supervision.

### 4.1.6 Appropriate Use of Antibiotics

The findings established that 144(67.3%) of health workers appropriately avoided unnecessary antibiotic prescription for acute watery diarrhoea cases, while 70(32.7%) prescribed antibiotics inappropriately.

**Table 7: Appropriate Use of Antibiotics**

| Antibiotic Use | Frequency | Percentage (%) |
|---|---|---|
| Appropriate Use | 144 | 67.3 |
| Inappropriate Use | 70 | 32.7 |
| **Total** | **214** | **100** |

These findings indicate gaps in rational antibiotic use and evidence-based prescribing among health workers. The observed non-adherence may be associated with diagnostic uncertainty, caregiver expectations, and limited reinforcement of antimicrobial stewardship during routine supervision. The findings highlight the need to strengthen antimicrobial stewardship, continuous clinical mentorship, and diagnostic support to improve adherence to national diarrhoea management guidelines.

### 4.1.7 Overall Level of Adherence to National Diarrhoea Management Guidelines

A composite adherence score was computed using six key components of recommended diarrhoea case management: dehydration assessment, appropriate prescription of oral rehydration salts (ORS), zinc supplementation, caregiver counselling, documentation of case management, and rational antibiotic use. Each correctly performed practice was assigned a score of 1, and each incorrect practice a score of 0. An individual health worker could therefore

obtain a total adherence score ranging from 0 to 5. The composite adherence score was converted to a percentage by dividing the total score by 5 and multiplying by 100. Health workers who achieved a score of 80% or above (equivalent to correctly performing at least four of the five guideline components) were classified as adherent, while those scoring below 80% were classified as non-adherent. The total score for each respondent was converted into a percentage using the formula:

Overall Adherence (%) = (Total Score Obtained ÷ Maximum Possible Score) × 100

**Table 8: Overall Adherence to National Diarrhoea Management Guidelines**

| Overall Adherence | Frequency | Percentage (%) |
|---|---|---|
| Adherent | 174 | 81.2 |
| Non-Adherent | 40 | 18.8 |
| **Total** | **214** | **100** |

Overall adherence to the national diarrhoea management guidelines was 174 (81.2%), while 40 (18.8%) of the health workers were non-adherent to the recommended diarrhoea management practices. This binary outcome variable was subsequently used in the Chi-square analysis and binary logistic regression. The mean composite adherence score was 81.2%, indicating that, on average, health workers correctly implemented approximately four-fifths of the recommended diarrhoea management practices. These findings indicate a generally high level of adherence to the national guidelines for the management of diarrhoea among under-five children in public health facilities within Embakasi Region.

The relatively high adherence may be attributed to widespread IMCI training, availability of diarrhoea management guidelines and job aids, supportive supervision, mentorship, and access to essential commodities such as ORS and zinc, which support evidence-based clinical decision-making during routine patient management. However, lower adherence to caregiver counseling, documentation, and rational antibiotic use suggests that activities requiring communication skills, clinical judgment, and adequate consultation time remain more susceptible to non-compliance, particularly in busy outpatient settings.

The findings are consistent with WHO and UNICEF (2020), which reported that implementation of IMCI guidelines improves the quality of childhood diarrhoea case management in low- and middle-income countries. Similarly, McLaughlin et al. (2025) observed high adherence to dehydration assessment and ORS prescription but identified persistent gaps in caregiver counselling, documentation, and antibiotic stewardship.

Overall, the findings suggest that although adherence to the national diarrhoea management guidelines was generally high, sustained improvement will require continued strengthening of IMCI implementation, supportive supervision, continuous professional development, and interventions that promote comprehensive evidence-based clinical decision-making, particularly in counselling, documentation, and rational antibiotic use.

## 5. Conclusion

The study concluded that health worker adherence to national diarrhoea management guidelines was generally high but uneven across components, with strong performance in clinical management practices and comparatively weaker adherence in caregiver counselling, documentation, and rational antibiotic use.

## 6. Recommendations

Based on the findings of this study, the following recommendations are proposed to improve health worker adherence to the National Diarrhoea Management Guidelines among children under five years in public health facilities.

The County Department of Health should institutionalize quarterly Integrated Management of Childhood Illness (IMCI) refresher training for all health workers involved in outpatient management of children under 5. The training should emphasize dehydration assessment, appropriate use of ORS and zinc, rational antibiotic prescribing, caregiver counselling, and accurate documentation to address the identified gaps in adherence.

The County Department should also establish a quarterly supportive supervision programme using standardized supervision checklists based on the National Diarrhoea Management Guidelines. Supervisory visits should incorporate mentorship, clinical audits, and immediate feedback to reinforce adherence to recommended practices.

In collaboration with the Kenya Medical Supplies Authority (KEMSA), the County should strengthen supply chain management by implementing routine monitoring of ORS, zinc, and other essential paediatric commodities to minimize stock-outs and ensure uninterrupted availability of treatment supplies.

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