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Orapuh Journal

ORIGINAL ARTICLE

Journal of Oral & Public Health

Qualitative Evaluation of Health Service Utilization in the Kenge Health Zone, Kwango Province, Democratic Republic of the Congo

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ARTICLE INFO

Received: *09 April 2026*
Accepted: *24 June 2026*
Published: *31 August 2026*

Keywords:
Quality assessment, service utilization, health zone, Kenge, organizational performance

Peer-Review: *Externally peer-reviewed*

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To cite:
Nsungu, E. M., Otshomampita, A. A., Nswele, O. I., Onoya, J. W., Mandina, F. M. M., Ngbolua, J. P. K. T., & Matondo, A. (2026). Qualitative evaluation of health service utilization in the Kenge health zone, Kwango Province, Democratic Republic of the Congo *Orapuh Journal, 7*(7), e1469. https://doi.org/10.4314/orapj.v7i7.69

ISSN: *2644-3740*

Published by ***Orapuh, Inc.***, F. Gaye Res., Sukuta-Jamisa, Greater Banjul, The Gambia.

Editor-in-Chief: *Prof. V. E. Adamu (editor@orapuh.org)*

ABSTRACT

Introduction

The population of the Kenge health zone faces serious difficulties in accessing quality healthcare. A prior study revealed that only 38.8% of the population used formal health facilities, whereas 39.3% preferred self-medication and 15.1% resorted to traditional treatment (Nsungu, 2023).

Purpose

This study evaluated the quality and utilization of health services to determine organizational performance within the Kenge health zone.

Methods

A retrospective descriptive empirical study was conducted across 20 randomly selected health areas in the Kenge health zone. Data were extracted from the Public Utility Establishment for Performance-Based Financing (EUP-FBP) quality assessment tool developed by the Health System Development Project (PDSS), comprising 15 standard evaluation domains.

Results

Out of a maximum score of 402 points, the health zone obtained 231.25 points (57.5%) in 2024 and 243.25 points (60.5%) in 2025, representing a slight improvement of 3.0%.

Conclusion

Based on the 80% benchmark established by the PDSS, organizational performance and service utilization remain low. Although minor progress occurred in 2025, healthcare services remain underutilized by the community.

INTRODUCTION

Despite global progress in public health, systemic failures in healthcare access remain widespread. Issues such as unassisted childbirth complications, inadequate immunization coverage, poor slum sanitation, high pedestrian mortality, and catastrophic out-of-pocket health expenditures highlight persistent structural vulnerabilities (World Health Organization [WHO], 2008).

Globally, inadequate financing drives health inequities. In many low- and middle-income countries, direct out-of-pocket payments remain the primary financing mechanism, causing financial hardship and restricting service access (Navarro & Lievens, 2012; Salah, 2013; Wery, 2015). Even in high-income contexts, structural barriers persist; for instance, marginalized groups in Quebec encounter severe cost and institutional exclusion barriers (Kamgain, 2015). Conversely, countries like Sweden have restructured service delivery to reach remote populations using innovative digital health frameworks (Roberts et al., 2010). In France, spatial accessibility is measured by physical distance to care providers (Com-Ruelle et al., 2016; Lucas-Gabrielli et al., 2016). Progress toward Universal Health Coverage (UHC) universally demands equitable financing mechanisms (Ridde et al., 2014).

In sub-Saharan Africa, households fund up to 80% of total health expenditures, increasing vulnerability to poverty. In contrast, high-income nations maintain diversified funding models where the state bears the primary financial burden (Directorate for Research, Studies, Evaluation and Statistics [DREES], 2022; World Bank, 2017). In Mali, financial barriers force underserved populations to seek care from traditional healers or street medicine vendors, or to forego treatment entirely (Flachenberg & Talibo, 1998). Similarly, in Burundi, over 17% of vulnerable individuals avoid basic medical consultations due to financial constraints (Médecins Sans Frontières [MSF] Belgium, 2004). Studies in Burkina Faso indicate that determinants of initial health-seeking decisions differ significantly from those governing long-term patient loyalty (Mugisha et al., 2006). In Cameroon, low consumption profiles limit access, making lack of funds the chief driver of self-medication and care abstention (Commeyras & Ndo, 2003).

In the Democratic Republic of Congo (DRC), persistent political and economic crises have severely disrupted health system infrastructure, leading to resource depletion, environmental deterioration, and worsening disease burdens (Tonduangu, 2019). Research in the Pweto health zone (Katanga Province) revealed that curative consultation rates failed to reach the WHO benchmark of 0.5 consultations per capita per year (Cilundika Mulenga et al., 2015). Furthermore, fee-for-service billing models in 70% of clinics and 73% of private facilities drive healthcare inaccessibility across the country (School of Public Health, University of Kinshasa [ESP], 2019). In the Kenge health zone, key determinants of low service utilization include household head gender, facility choice rationale, fee structures, treatment costs, and payment mechanisms (Nsungu, 2023).

Problem Statement and Rationale

National health policies in the DRC have historically lacked targeted mechanisms to protect poor and indigent populations from financial exclusion, leaving cost-determination largely to uncoordinated private and faith-based providers (Ministry of Public Health, 2004, 2018). This state disengagement has created an unregulated market of private clinics and informal vendors, shifting financial burdens directly onto household savings.

In Kenge (Kwango Province), poverty is exacerbated by reliance on informal agriculture (59.7% of the workforce), with formal employment accounting for only 11.5% of jobs. Geographic isolation, long travel distances, high healthcare costs, and low average incomes exacerbate barriers to care (Nsungu, 2023).

Research Question

Do residents of the Kenge health zone utilize available medical services, and what factors contribute to service inaccessibility?

Research Hypothesis

Residents of the Kenge health zone underutilize available health services due to high care costs, suboptimal service quality, staff misconduct, and long geographical distances to facilities.

Objective

To evaluate the quality, performance, and determinants of health service utilization in the Kenge health zone.

METHODS

Study Setting

The Kenge health zone is located in Kenge Territory, Kwango Province. It is bordered by the Kikongo Health Zone and the Wamba River to the north, the Kimbau Health Zone to the south, the Inzia River and Masimanimba Health Zone to the east, and the Boko Health Zone to the west. Access relies primarily on unpaved secondary roads that become impassable during the rainy season. National Route 1 connects Kenge to Kinshasa (280 km). The zone covers an estimated area of 5,558 km² with a population of approximately 320,196 inhabitants (density: 57.6 inhabitants/km²). Lingala and Kikongo are the primary local languages.

Study Design and Sampling

This study employed an empirical, retrospective descriptive design using secondary evaluation data from the Public Utility Establishment for Performance-Based Financing (EUP-FBP) under the Health System Development Project (PDSS). Out of 29 total health areas in the zone, 20 were selected using simple random sampling weighted by population size: Bangombe, Bangongo, Barrière, CBCO, Fasamba, Gabia, Kapay Lono, Kasombo, Kimafu, Kobo, Kolokoso, Makiala, Makiosi, Misele, Mukila, Mukumbi, Musaka, Musangu Tsay, Saint Esprit, and Saint Pierre.

Inclusion and Exclusion Criteria

A. **Inclusion Criteria:** Designated health areas located within the Kenge health zone that were formally selected in the study sample.

B. **Exclusion Criteria:** Health areas outside the Kenge health zone, or health areas within the zone that were not selected during random sampling.

Data Collection and Measurement

Data were collected using the standardized PDSS Quality Assessment Grid, which evaluates organizational performance across 15 operational indicators:

1. General Organization
2. Management Plan
3. Financial Management
4. Committee for the Indigent
5. Hygiene and Sterilization
6. Outpatient Consultations
7. Family Planning
8. Laboratory Services
9. Inpatient/Hospitalization Services
10. Medicines and Consumables
11. Tracer Medicines
12. Gynecology and Obstetrics
13. Expanded Program on Immunization (EPI / PEV)
14. Prenatal Care (ANC / CPN)
15. HIV/TB Services

The tool's validity and reliability are established nationally across PDSS-supported health zones in the DRC, where it serves as the official framework for auditor verifications and performance-based bonus allocations.

Data Analysis

Quarterly evaluation scores verified by EUP auditors were averaged to calculate annual scores. Service utilization levels were categorized based on the standard PDSS performance thresholds:

i. **≥ 80.0%:** Effective utilization / Very good performance

ii. **70.0% – 79.9%:** Good utilization / Good performance

iii. **60.0% – 69.9%:** Fair utilization / Acceptable performance

iv. **50.0% – 59.9%:** Low utilization / Low performance

v. **< 50.0%:** Inadequate utilization / Poor performance

Ethical Considerations

Approval was granted by the Ethics Committee of the Doctoral School at the Higher Institute of Medical Techniques of Kinshasa (Ref: 0002/CBE/ISTM/KIN/RDC/PMBBL/2024, pursuing

Decision No. 055/ESU/ISTM/DG/2022). Administrative authorization was granted by the EUP-FBP branch head. Data were fully anonymized prior to analysis.

RESULTS

Quality Assessment (2024)

In 2024, the Kenge health zone scored 231.25 points out of a maximum of 402 points, corresponding to an overall performance rating of 57.5% (Low performance).

Table 1:
Quality Assessment and Health Service Utilization in the Kenge Health Zone (2024)

No.	Indicator / Service Domain	Max Score	Points Achieved	Score (%)
1	General Organization	31.00	21.00	67.7%
2	Management Plan	9.00	9.00	100.0%
3	Financial Management	15.00	4.00	26.6%
4	Committee for the Indigent	20.00	5.00	25.0%
5	Hygiene and Sterilization	31.00	5.50	17.7%
6	Outpatient Consultations	125.00	65.50	52.4%
7	Family Planning	32.00	16.00	50.0%
8	Laboratory Services	17.00	14.00	82.3%
9	Hospitalization / Inpatient Services	6.00	3.25	54.1%
10	Medicines and Consumables	20.00	17.00	85.0%
11	Availability of Tracer Medicines	32.00	25.50	79.6%
12	Gynecology and Obstetrics	24.00	20.50	85.4%
13	Vaccination (EPI / PEV)	20.00	12.50	62.5%
14	Prenatal Care (ANC / CPN)	12.00	7.00	58.3%
15	HIV/TB Services	8.00	5.50	68.7%
Total	**Overall Zone Score**	**402.00**	**231.25**	**57.5%**

In 2024, the Management Plan achieved maximum compliance (100.0%), followed by Gynecology-Obstetrics (85.4%), General Medicines/Consumables (85.0%), and Laboratory Services (82.3%). In contrast, critical administrative and safety domains scored poorly, notably Financial Management (26.6%), Committee for the Indigent functioning (25.0%), and Hygiene and Sterilization (17.7%).

Quality Assessment (2025)

In 2025, the zone scored 243.25 points out of 402 points, yielding an overall rating of 60.5% (Fair/Acceptable performance).

Table 2:
Quality Assessment and Health Service Utilization in the Kenge Health Zone (2025)

No.	Indicator / Service Domain	Max Score	Points Achieved	Score (%)
1	General Organization	31.00	21.00	67.7%
2	Management Plan	9.00	9.00	100.0%
3	Financial Management	15.00	4.00	26.6%
4	Committee for the Indigent	20.00	5.00	25.0%
5	Hygiene and Sterilization	31.00	10.50	33.8%
6	Outpatient Consultations	125.00	71.50	57.2%
7	Family Planning	32.00	16.00	50.0%
8	Laboratory Services	17.00	14.00	82.3%
9	Hospitalization / Inpatient Services	6.00	3.25	54.1%
10	Medicines and Consumables	20.00	17.00	85.0%
11	Availability of Tracer Medicines	32.00	25.50	79.6%
12	Gynecology and Obstetrics	24.00	20.50	85.4%
13	Vaccination (EPI / PEV)	20.00	12.50	62.5%
14	Prenatal Care (ANC / CPN)	12.00	8.00	66.6%
15	HIV/TB Services	8.00	5.50	68.7%
Total	**Overall Zone Score**	**402.00**	**243.25**	**60.5%**

Comparative Analysis (2024 vs. 2025)

Overall performance improved by 3.0 percentage points between 2024 (57.5%) and 2025 (60.5%).

Table 3:
Comparative Service Performance and Utilization (2024–2025)

No.	Service Indicator	Max Score	2024 Points	2024 (%)	2025 Points	2025 (%)	Net Change %)
1	General Organization	31.00	21.00	67.7%	21.00	67.7%	0.0%
2	Management Plan	9.00	9.00	100.0%	9.00	100.0%	0.0%
3	Financial Management	15.00	4.00	26.6%	4.00	26.6%	0.0%
4	Committee for the Indigent	20.00	5.00	25.0%	5.00	25.0%	0.0%
5	Hygiene and Sterilization	31.00	5.50	17.7%	10.50	33.8%	+16.1%
6	Outpatient Consultations	125.00	65.50	52.4%	71.50	57.2%	+4.8%
7	Family Planning	32.00	16.00	50.0%	16.00	50.0%	0.0%
8	Laboratory Services	17.00	14.00	82.3%	14.00	82.3%	0.0%
9	Hospitalization Services	6.00	3.25	54.1%	3.25	54.1%	0.0%
10	Medicines & Consumables	20.00	17.00	85.0%	17.00	85.0%	0.0%
11	Tracer Medicines	32.00	25.50	79.6%	25.50	79.6%	0.0%
12	Gynecology & Obstetrics	24.00	20.50	85.4%	20.50	85.4%	0.0%
13	Vaccination (EPI / PEV)	20.00	12.50	62.5%	12.50	62.5%	0.0%
14	Prenatal Care (ANC / CPN)	12.00	7.00	58.3%	8.00	66.6%	+8.3%
15	HIV/TB Services	8.00	5.50	68.7%	5.50	68.7%	0.0%
Total	**Overall Performance**	**402.00**	**231.25**	**57.5%**	**243.25**	**60.5%**	**+3.0%**

Performance across 12 of the 15 indicators remained static. Gains were restricted to three domains: Hygiene and Sterilization (+16.1%), Prenatal Care (+8.3%), and Outpatient Consultations (+4.8%).

DISCUSSION

The performance scores of 57.5% (2024) and 60.5% (2025) demonstrate that health services remain underutilized in Kenge, falling substantially short of the PDSS 80.0% benchmark for effective organizational performance.

These findings align with healthcare utilization research across developing regions. Sadio and Diop (1994) observed that 50% of sick individuals in rural Senegal refrained from accessing modern medical providers due to system-level barriers. Similarly, Levinais and Kaddar (1996) emphasized

that out-of-pocket health costs create severe financial shocks for low-income households, directly depressing healthcare utilization. In Burundi, MSF Belgium (2004) identified financial insolvency as the cause of non-consultation for 82% of untreated individuals.

Our results mirror findings by Krishna et al. (2023) in Lubumbashi, DRC, where the lack of state health insurance or risk-pooling coverage severely restricted medical service consumption. In rural Mali, patients frequently postpone health consultations until market days to raise liquid capital or delay treatment until conditions become life-threatening (Flachenberg & Talibo, 1998). In Kadutu (South Kivu, DRC), Mushagalusa Salongo (2005) highlighted that poverty forces households to rely on self-medication until illness severity obligates hospitalization, reinforcing cycles of impoverishment.

The low scores recorded for financial management (26.6%) and indigent care committees (25.0%) demonstrate structural weaknesses in local health governance, contradicting WHO (2008, 2019) Universal Health Coverage goals. The underutilization of services in Kenge stems directly from systemic poverty, severe physical remoteness, and unmanageable out-of-pocket medical expenses.

Limitations

This study relies on retrospective secondary data, which carries inherent risks of missing records or reporting inconsistencies across quarters. The primary limitation is the lack of primary observational control over original facility-level data entry. Future prospective studies should evaluate targeted financing interventions, community mutual health funds, and structural health system reforms.

CONCLUSION

The overall quality assessment scores of 57.5% in 2024 and 60.5% in 2025 confirm that organizational performance and service utilization in the Kenge health zone remain low. Despite slight gains in hygiene and prenatal services, health utilization falls well below national benchmarks, confirming the research hypothesis.

Policy Recommendations

1. **Strengthen Health Coverage & Risk Pooling:** Establish mutual health insurance schemes and transition away from direct out-of-pocket payments to prepayment risk-pooling models.
2. **Infrastructure and Accessibility:** Restructure health zone boundaries to reduce travel distances for rural communities.
3. **Flexible Pricing Structures:** Implement standardized flat-rate fee schedules adjusted for household socio-economic status, and explore flexible payment modalities for agricultural communities.

Acknowledgments: The authors express their sincere gratitude to the members of the management committee of the Higher Institute of Medical Techniques of Kinshasa and to those of the doctoral school coordination team for their institutional support throughout this study.

Use of Artificial Intelligence (AI) Declaration: No artificial intelligence tools were used in the generation or interpretation of the findings of this study.

Authors' Contributions:

i. **Nsungu Mbuku Emery:** Writing – original draft, Investigation, Writing – review & editing.
ii. **Otshomampita Aloki Adalbert**: Supervision, Project administration, Writing – review & editing, Validation.
iii. **Nswele Ilundu Odon:** Conceptualization, Methodology, Writing – review & editing, Validation.
iv. **Onoya Wedi Josué:** Software, Formal analysis, Data curation.
v. **Mandina Flory:** Methodology, Writing – review & editing, Validation.
vi. **Ngbolua Koto-te-Nyiwa Jean-Paul:** Formal analysis, Validation, Visualization.
vii. **Matondo Aristote:** Validation, Writing – review & editing.

Data Availability Statement: The data used in this study come from the data verification and validation results of the auditors of the Public Service Establishment for Performance-Based Financing (EUP-FBP) within the framework of the Health System Development Project (PDSS).

Ethical Approval: Ethics approval was granted by the Bioethics Committee of the Higher Institute of Medical Techniques of Kinshasa (Ref: 055/ESU/ISTM/DG/2022, Dated Oct 6, 2022; Ethics Certificate 0002/CBE/ISTM/KIN/RDC/PMBBL/2024).

Funding: The authors declare that no financial support was received for the research, authorship, or publication of this article.

Conflicts of Interest: The authors declare that they have no conflicts of interest.

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