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# Comparing Perceptions of Quality of Primary Care Services in Public Health Facilities in Bayelsa State Using the SERVQUAL Tool: *Insured versus Uninsured patients*

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## ABSTRACT

Perceived quality of healthcare influences patient satisfaction, service utilization, and progress toward Universal Health Coverage. However, differences in quality perception between insured and uninsured patients in public primary care settings remain poorly understood. This study compared perceptions of quality of primary care services among insured and uninsured patients attending selected public health facilities in Yenagoa. A comparative cross-sectional study was conducted among 550 respondents (275 insured and 275 uninsured) selected through simple random sampling. Data were collected using a structured questionnaire adapted from the SERVQUAL model and analyzed using descriptive statistics, independent sample t-test, Chi-square, and logistic regression at  $p < 0.05$ . Both groups reported negative service quality gap scores, indicating unmet expectations; however, uninsured respondents had significantly better perceptions than insured respondents (overall gap score:  $-0.34 \pm 0.43$  vs  $-0.49 \pm 0.47$ ;  $t = -3.86$ ,  $p < 0.001$ ). Significant differences were observed in reliability ( $p = 0.012$ ), responsiveness ( $p < 0.001$ ), assurance ( $p = 0.004$ ), and empathy ( $p = 0.001$ ). Overall, 57.8% of uninsured respondents compared with 42.9% of insured respondents perceived good quality care ( $\chi^2 = 12.46$ ,  $p < 0.001$ ). Younger age (AOR = 1.82), high social class (AOR = 1.96), and uninsured status (AOR = 1.74) significantly predicted good quality perception. Long waiting time (68.2%) and poor staff attitude (54.9%) were major reasons for poor perception. The study concluded that significant quality gaps exist, particularly in responsiveness and service delivery processes. Improved waiting-time management, better provider-patient interactions, and reduced administrative barriers in insurance services are recommended.

**Keywords:** Primary healthcare quality; SERVQUAL; Perceived quality of care; Health insurance; Uninsured patients; Patient satisfaction; Quality gap analysis; Yenagoa.

## INTRODUCTION

Primary healthcare (PHC) remains the foundation of effective health systems and serves as the first level of contact between individuals and the healthcare delivery system. It plays a critical role in disease prevention, early diagnosis, treatment, continuity of care, and improved health outcomes. Strong primary care systems have been associated with reduced morbidity, lower healthcare costs, and improved equity in health service utilization, making PHC central to the attainment of Universal Health Coverage (UHC) and the Sustainable Development Goals (SDGs) (WHO, 2018; World Bank, 2019). However, in many low- and middle-income countries, including Nigeria, persistent concerns remain regarding the quality, accessibility, responsiveness, and patient-centeredness of primary care services, particularly in public health facilities (Ogaji et al., 2020; Lateef & Mhlongo, 2022). Patient perceptions of healthcare quality have become increasingly recognized as an important dimension of service evaluation because they influence service utilization, adherence to treatment, satisfaction, and health-seeking behaviour.

Quality of healthcare is a multidimensional concept often assessed from both technical and experiential perspectives. While technical quality relates to provider competence and adherence to standards, patients often judge quality based on service experiences such as waiting time, provider attitudes, communication, facility conditions, and promptness of care. The SERVQUAL model has been widely used to evaluate perceived service quality through five domains—tangibility, reliability, responsiveness, assurance, and empathy (Endeshaw, 2021; Jonkisz *et al.*, 2021). The model conceptualizes quality as the gap between patient expectations and perceptions of services received, with positive gap scores indicating satisfaction and perceived good quality. In healthcare settings, SERVQUAL has been applied extensively to assess gaps in service delivery and identify areas requiring improvement (Jonkisz *et al.*, 2021; Zarei *et al.*, 2012; Purcărea *et al.*, 2013).

Health insurance is increasingly recognized as an important determinant of healthcare access and service experience. By reducing out-of-pocket expenditure and financial barriers, insurance can improve access to care; however, its effect on perceived quality of care remains mixed. Some studies have reported higher satisfaction among insured patients due to improved financial access and continuity of care, while others suggest that insured patients may report poorer perceptions because they have higher expectations and may experience administrative barriers, delays, or perceived discrimination in accessing services (Alhassan *et al.*, 2015; Fenny *et al.*, 2014; Andoh-Adjei *et al.*, 2018). In Nigeria, the expansion of the National Health Insurance Authority and subnational schemes such as the Bayelsa Health Insurance Scheme has increased enrolment, yet evidence remains limited regarding whether insured and uninsured patients perceive quality differently in public primary care facilities. Understanding these differences is essential because perception of poor quality can undermine trust in health insurance and weaken progress toward UHC.

Perception of quality may also be shaped by socio-demographic and health-system factors such as age, marital status, income, social class, health facility characteristics, and type of insurance coverage. Evidence suggests that these factors may influence expectations, interactions with providers, and judgments about care received (Kim *et al.*, 2021; Adhikary *et al.*, 2018; Ferreira *et al.*, 2023). In addition, differences in physical infrastructure, staff responsiveness, and organizational practices across facilities may create variations in service quality perception even within the same health system. In contexts where insured and uninsured patients are managed through separate administrative processes, concerns may arise regarding whether care experiences differ across insurance status. These concerns are particularly relevant in Bayelsa State, where limited published evidence exists on comparative perceptions of service quality among insured and uninsured users of public health facilities.

Previous studies from Ghana and Nigeria have produced inconsistent findings regarding differences in perceived service quality between insured and uninsured patients. Some studies reported no significant differences, whereas others found that uninsured patients reported better perceptions across several quality domains, possibly due to lower expectations or appreciation for care obtained through direct payment (Turkson, 2009; Duku *et al.*, 2018; Daramola *et al.*, 2020). These inconsistencies underscore the need for context-specific evidence using standardized tools such as SERVQUAL. Furthermore, understanding which domains contribute most to quality perception and identifying determinants of those perceptions can provide critical evidence for health managers and policymakers to strengthen patient-centered care, improve insurance performance, and address gaps in service delivery. Such evidence is particularly important in strengthening confidence in public-sector primary healthcare services.

Against this background, this study was undertaken to compare perceptions of quality of primary care services among insured and uninsured patients attending selected public health facilities in Yenagoa using the SERVQUAL tool. Specifically, the study sought to assess perceived quality across the five SERVQUAL domains (tangibility, reliability, responsiveness, assurance, and empathy), compare overall service quality gap scores between insured and uninsured patients, and determine socio-demographic and health-system factors associated with perception of service quality among both groups. The findings are expected to provide evidence to guide quality improvement strategies and strengthen equitable, patient-centered healthcare delivery in public primary care facilities.

## MATERIALS AND METHODS

### Study Area

This study was conducted in Yenagoa, the capital of Bayelsa State in the Niger Delta region of southern Nigeria. Yenagoa serves as a major administrative and commercial hub and hosts several public secondary and tertiary healthcare facilities that provide primary and outpatient services to a large catchment population. The study was undertaken in three major public health facilities in the metropolis: Federal Medical Centre Yenagoa, Niger Delta University Teaching Hospital, and Diye Koki Memorial Hospital. These facilities were selected because they are accredited providers for insured patients and also serve uninsured patients, making them suitable for comparative assessment.

### Study Design

A hospital-based comparative cross-sectional study design was adopted to compare perceptions of quality of primary care services among insured and uninsured patients attending selected public health facilities. This design was appropriate because it enabled simultaneous assessment and comparison of perceptions of service quality and associated factors between two population groups at a single point in time. The study was conducted between 2022 and 2023.

### Study Population

The study population comprised adult male and female patients aged 18 years and above attending primary care and general outpatient clinics in the selected facilities. Two groups of respondents were included: insured patients enrolled under the National Health Insurance Authority or Bayelsa Health Insurance Scheme, and uninsured patients accessing care through out-of-pocket payment. Eligible participants were adults who had completed their consultation or care process at the time of recruitment and consented to participate. Critically ill patients and those unable to provide informed responses were excluded.

### Sample Size Determination

The sample size was determined using the formula for comparing two proportions based on prior estimates of satisfaction among insured and uninsured patients:

$$n = \frac{(Z_{\alpha/2} + Z_{\beta})^2 [P_1(1 - P_1) + P_2(1 - P_2)]}{(P_1 - P_2)^2}$$

Using a 95% confidence level ( $Z = 1.96$ ), 80% power ( $Z = 0.84$ ), and previously reported proportions of 66.8% and 78.0%, the calculated minimum sample size was 550 participants, comprising 275 insured and 275 uninsured respondents.

### Sampling Technique

A simple random sampling technique with proportionate allocation was used. For insured participants, the sample was allocated proportionately across the three selected facilities based on average daily clinic attendance. Participants were selected through daily random sampling of eligible patients attending health insurance clinics. For uninsured participants, equal allocation was applied across the three facilities, and respondents were similarly selected through simple random sampling at general outpatient clinics. Exit interviews were conducted daily until the required sample size was achieved.

### Study Instrument

Data were collected using a structured interviewer-administered questionnaire consisting of four sections. Section A captured socio-demographic and socioeconomic characteristics, while Sections B–D were adapted from the SERVQUAL instrument developed by A. Parasuraman and colleagues. The tool contained 23 items distributed across five quality domains: tangibility (9 items), reliability (6 items), responsiveness (3 items), assurance (2 items), and empathy (3 items). Responses for expectations and perceptions were rated using a 5-point Likert scale.

### Measurement of Variables

Perceived quality of healthcare services was assessed using the SERVQUAL gap model where:

$$\text{Gap Score} = P - E$$

where  $P$  = perception score and  $E$  = expectation score. Positive gap scores indicated good perceived quality, while negative gap scores indicated poor perceived quality. Domain-specific gap scores and cumulative overall quality gap scores were computed. For regression analysis, quality perception was dichotomized into good quality and poor quality based on gap score outcomes.

**Validity and Reliability**

The instrument was pretested among 55 patients in a health facility outside the study sites to improve clarity and minimize ambiguity. Content validity was established through expert review by specialists in public health and health services management. Internal consistency reliability was assessed using Cronbach’s alpha, yielding a coefficient of 0.89, indicating high reliability.

**Data Collection Procedure**

Data were collected through exit interviews conducted by trained research assistants following informed consent. Three resident doctors served as research assistants after training on study objectives, ethical procedures, and standardized questionnaire administration. Interviews were conducted after participants completed their care process for the day. Completed questionnaires were checked daily for completeness and consistency.

**Data Analysis**

Data were entered into Microsoft Excel, cleaned, and exported into IBM SPSS version 28 for analysis. Descriptive statistics including frequencies, percentages, means, and standard deviations were used to summarize variables. Independent sample Student’s t-test was used to compare mean expectation, perception, and gap scores between insured and uninsured respondents. Chi-square tests were used to assess associations between socio-demographic variables and perceived quality of care. Multivariable logistic regression was performed to identify determinants of good quality perception, with adjusted odds ratios (AORs), 95% confidence intervals, and p-values reported. Statistical significance was set at  $p < 0.05$ .

**Ethical Considerations**

Ethical approval for the study was obtained from the Bayelsa State Ministry of Health Research Ethics Committee. Administrative approval was obtained from the management of participating health facilities. Participation was voluntary, written informed consent was obtained from all respondents, confidentiality was maintained, and no personal identifiers were collected. Participants were informed of their right to decline or withdraw at any point without consequences.

**RESULTS**

**Socio-demographic Characteristics of Respondents**

There were no statistically significant differences between insured and uninsured respondents for Socio-demographic Characteristics (Table 1) with respect to age ( $\chi^2 = 3.84, p = 0.146$ ), sex ( $\chi^2 = 0.62, p = 0.431$ ), and marital status ( $\chi^2 = 0.58, p = 0.446$ ), as all p-values were greater than 0.05. This indicates that both study groups were comparable in their socio-demographic characteristics, thereby minimizing confounding and supporting valid comparison of perceived quality between groups.

Table 1. Socio-demographic characteristics of insured and uninsured respondents (n = 550)

Variable	Insured n (%)	Uninsured n (%)	Total n (%)	$\chi^2$	p-value
Age (years)					
18–34	112 (40.7)	98 (35.6)	210 (38.2)	3.84	0.146
35–54	121 (44.0)	129 (46.9)	250 (45.5)		
≥55	42 (15.3)	48 (17.5)	90 (16.4)		
Sex					
Male	109 (39.6)	118 (42.9)	227 (41.3)	0.62	0.431
Female	166 (60.4)	157 (57.1)	323 (58.7)		
Marital status					
Single	84 (30.5)	92 (33.5)	176 (32.0)	0.58	0.446
Married	191 (69.5)	183 (66.5)	374 (68.0)		

**Comparison of Mean SERVQUAL Scores**

The Mean Expectation, Perception and Gap Scores (Table 2) showed a statistically significant differences between insured and uninsured respondents in tangibility perception ( $t = -2.21, p = 0.028$ ), reliability gap score ( $t = -2.53, p = 0.012$ ), responsiveness gap score ( $t = -3.71, p < 0.001$ ), assurance gap score ( $t = -2.89, p = 0.004$ ), empathy gap score ( $t = -3.42, p = 0.001$ ), and overall quality gap score ( $t = -3.86, p < 0.001$ ). Uninsured respondents had significantly better perception scores and smaller negative gap scores compared with insured respondents. However, no significant differences were observed for tangibility expectation ( $p = 0.412$ ) and tangibility gap score ( $p = 0.082$ ). Overall, both groups had negative gap scores, indicating unmet service expectations.

Table 2. Comparison of mean expectation, perception and gap scores between insured and uninsured respondents

SERVQUAL Domain	Insured Mean ± SD	Uninsured Mean ± SD	t-value	p-value
Tangibility Expectation	4.58 ± 0.44 <sup>a</sup>	4.61 ± 0.39 <sup>a</sup>	-0.82	0.412
Tangibility Perception	3.96 ± 0.66 <sup>b</sup>	4.08 ± 0.61 <sup>b</sup>	-2.21	0.028*
Tangibility Gap Score	-0.62 ± 0.71 <sup>a</sup>	-0.53 ± 0.65 <sup>a</sup>	-1.74	0.082
Reliability Gap Score	-0.41 ± 0.62 <sup>b</sup>	-0.28 ± 0.58 <sup>b</sup>	-2.53	0.012*
Responsiveness Gap Score	-0.57 ± 0.70 <sup>b</sup>	-0.36 ± 0.63 <sup>b</sup>	-3.71	<0.001*
Assurance Gap Score	-0.34 ± 0.56 <sup>b</sup>	-0.21 ± 0.51 <sup>b</sup>	-2.89	0.004*
Empathy Gap Score	-0.49 ± 0.64 <sup>b</sup>	-0.31 ± 0.59 <sup>b</sup>	-3.42	0.001*
Overall Quality Gap Score	-0.49 ± 0.47 <sup>b</sup>	-0.34 ± 0.43 <sup>b</sup>	-3.86	<0.001*

\*Significant at  $p < 0.05$ . <sup>a</sup> Mean difference not statistically significant ( $p > 0.05$ ). <sup>b</sup> Mean difference statistically significant ( $p < 0.05$ ).

### Overall Perceived Quality of Care

The overall perception of quality of care (Table 3) showed a statistically significant association between insurance status and perceived quality of care ( $\chi^2 = 12.46$ ,  $p < 0.001$ ). A higher proportion of uninsured respondents (57.8%) reported good quality care compared with insured respondents (42.9%). This suggests that uninsured respondents were significantly more likely to perceive healthcare services positively than insured respondents.

Table 3. Overall perception of quality of care among respondents

Perceived Quality	Insured n (%)	Uninsured n (%)	Total n (%)	$\chi^2$	p-value
Good quality	118 (42.9)	159 (57.8)	277 (50.4)	12.46	<0.001*
Poor quality	157 (57.1)	116 (42.2)	273 (49.6)		

\*Significant at  $p < 0.05$

### Factors Associated with Perceived Quality of Care

The result for the association between selected factors and good perceived quality (Table 4), statistically recorded Age below 35 years ( $\chi^2 = 8.61$ ,  $p = 0.003$ ), high social class ( $\chi^2 = 10.52$ ,  $p = 0.001$ ), and insurance status ( $\chi^2 = 12.46$ ,  $p < 0.001$ ) were significantly associated with good perceived quality of care. However, marital status was not significantly associated with quality perception ( $\chi^2 = 0.11$ ,  $p = 0.738$ ). This indicates that younger respondents, respondents in higher social class, and uninsured respondents were more likely to report good quality perception.

Table 4. Association between selected factors and good perceived quality of care

Variable	Good Quality n (%)	Poor Quality n (%)	$\chi^2$	p-value
Age <35 years	125 (45.5)	85 (30.9)	8.61	0.003*
Married	186 (67.6)	188 (68.9)	0.11	0.738
High social class	148 (53.8)	109 (39.9)	10.52	0.001*
Insured status	118 (42.9)	157 (57.1)	12.46	<0.001*

\*Significant at  $p < 0.05$

### Logistic Regression Analysis of Predictors of Good Quality Perception

The Multivariable logistic regression (Table 5) showed that age below 35 years significantly predicted good perceived quality (AOR = 1.82, 95% CI: 1.20–2.76,  $p = 0.005$ ), as did high social class (AOR = 1.96, 95% CI: 1.31–2.94,  $p = 0.001$ ). Uninsured respondents had significantly higher odds of reporting good quality compared with insured respondents (reference category) (AOR = 1.74, 95% CI: 1.19–2.55,  $p = 0.004$ ). Sex and marital status were not significant predictors ( $p > 0.05$ ). These findings indicate that age, social class, and insurance status independently influenced quality perception.

Table 5. Multivariable logistic regression of predictors of good perceived quality

Variable	AOR	95% CI	p-value
Age <35 years	1.82	1.20–2.76	0.005*
High social class	1.96	1.31–2.94	0.001*
Uninsured (Ref: Insured)	1.74	1.19–2.55	0.004*
Female (Ref: Male)	1.18	0.80–1.74	0.392
Married (Ref: Single)	0.93	0.61–1.43	0.744

\*Significant at  $p < 0.05$

**Comparison of SERVQUAL Domain Rankings**

The ranking of quality deficits by SERVQUAL domain (Table 6) recorded responsiveness (mean gap = -0.57) and tangibility (mean gap = -0.62) showed the largest negative service quality gaps, indicating the greatest deficits in these domains. Assurance had the smallest negative gap (-0.34), suggesting relatively better performance in provider competence and trust. These findings imply that delays in care, promptness of services, and facility conditions were the domains most requiring improvement.

Table 6. Ranking of quality deficits by SERVQUAL domain

Domain	Mean Gap Score	Rank
Responsiveness	-0.57	1
Tangibility	-0.62	2
Empathy	-0.49	3
Reliability	-0.41	4
Assurance	-0.34	5

**Comparison of Mean SERVQUAL Expectation Scores by Domain**

The comparison of mean SERVQUAL expectation scores by domain (Table 7) indicated no statistically significant differences in the expectation scores between insured and uninsured respondents across tangibility (p = 0.412), reliability (p = 0.246), responsiveness (p = 0.302), assurance (p = 0.162), and empathy (p = 0.201), as all p-values exceeded 0.05. This indicates both groups had similar expectations regarding healthcare quality, suggesting that differences in perceived quality arose from service experiences rather than differences in expectations.

Table 7. Comparison of Mean SERVQUAL Expectation Scores by Domain

Domain	Insured Mean ± SD	Uninsured Mean ± SD	t-value	p-value
Tangibility	4.58 ± 0.44 <sup>a</sup>	4.61 ± 0.39 <sup>a</sup>	-0.82	0.412
Reliability	4.51 ± 0.48 <sup>a</sup>	4.56 ± 0.41 <sup>a</sup>	-1.16	0.246
Responsiveness	4.63 ± 0.42 <sup>a</sup>	4.67 ± 0.38 <sup>a</sup>	-1.03	0.302
Assurance	4.49 ± 0.51 <sup>a</sup>	4.55 ± 0.46 <sup>a</sup>	-1.40	0.162
Empathy	4.46 ± 0.53 <sup>a</sup>	4.52 ± 0.49 <sup>a</sup>	-1.28	0.201

<sup>a</sup> Mean difference not statistically significant (p > 0.05). <sup>b</sup> Mean difference statistically significant (p < 0.05). Significant at 95% confidence level.

**Facility-Level Variation in Overall Perceived Quality**

There was a statistically significant association between facility attended and perceived quality (Table 8) of care ( $\chi^2 = 8.54, p = 0.014$ ). Respondents attending Niger Delta University Teaching Hospital had the highest proportion reporting good quality (56.8%), while respondents at Diète Koki Memorial Hospital had the lowest (42.2%). This suggests that institutional differences significantly influenced patient perception of service quality.

Table 8. Facility-Level Variation in Overall Perceived Quality of Care

Health Facility	Good Quality n (%)	Poor Quality n (%)	$\chi^2$	p-value
Federal Medical Centre	96 (52.2)	88 (47.8)	8.54	0.014*
NDUTH Okolobiri	104 (56.8)	79 (43.2)		
Diète Koki Memorial Hospital	77 (42.2)	106 (57.8)		

\*Significant at p < 0.05

**Reasons for Poor Quality Perception**

Among respondents reporting poor quality perception (Table 9), long waiting time (68.2%) was the most frequently cited reason, followed by poor staff attitude (54.9%), drug unavailability (49.3%), administrative delays (43.1%), and poor communication (38.4%). These findings indicate that structural inefficiencies and provider-related factors contributed substantially to poor service quality perception.

Table 9. Reasons for Poor Quality Perception by Insurance Status

Reason for Poor Quality Perception	Insured n (%)	Uninsured n (%)	Total n (%)	$\chi^2$	p-value
Long waiting time	102 (64.9)	84 (72.4)	186 (68.2)	1.74	0.187
Poor staff attitude	91 (58.0)	59 (50.9)	150 (54.9)	1.36	0.243
Drug unavailability	83 (52.9)	51 (44.0)	134 (49.3)	2.11	0.146
Administrative delays	82 (52.2)	36 (31.0)	118 (43.1)	11.82	0.001*
Poor communication	59 (37.6)	46 (39.7)	105 (38.4)	0.13	0.719

\*Significant at p < 0.05

## DISCUSSION

The present study compared perceptions of quality of primary care services among insured and uninsured patients and demonstrated significant gaps between patients' expectations and perceptions of healthcare received, as reflected by negative SERVQUAL gap scores across domains. Negative gap scores indicate that services received fell below respondents' expectations, suggesting important quality deficits in the public primary care system. This finding aligns with the SERVQUAL framework developed by A. Parasuraman, which posits that negative gap scores reflect unmet service expectations and poor perceived quality. Similar findings of negative quality gap scores have been reported in Ethiopia, Kenya, Ghana, and Romania, where patients perceived gaps in responsiveness, empathy, and facility conditions despite overall access to care (Karume *et al.*, 2025; Asare *et al.*, 2024). The findings therefore suggest that although care is being accessed, significant quality concerns persist in the patient experience dimension of service delivery.

An important finding of this study was that uninsured respondents reported significantly better perceived quality of care than insured respondents, as shown by smaller negative overall quality gap scores and a significantly higher proportion reporting good quality care (57.8% versus 42.9%,  $p < 0.001$ ). This finding is consistent with studies that reported insured patients sometimes express lower satisfaction or poorer perceptions because insurance enrolment may increase expectations or expose patients to administrative bottlenecks such as authorization delays, referral challenges, or long waiting processes (Mohammed *et al.*, 2013; Nwanaji-Enwerem *et al.*, 2022). Similar findings were reported in Ghana, where uninsured patients reported better perceptions in some service domains than insured patients under the national health insurance scheme (Turkson, 2009). One plausible explanation is that uninsured patients paying directly for services may perceive received care more favorably or may have lower expectations than insured patients. This finding also suggests that expanding financial coverage alone may not automatically improve perceived quality unless accompanied by improvements in service responsiveness and patient experience.

The significant differences observed across reliability, responsiveness, assurance, and empathy domains further suggest that disparities in perceived quality were multidimensional rather than restricted to a single service domain. Responsiveness showed one of the greatest deficits, indicating concerns related to prompt attention, waiting time, and timely service delivery. This finding is consistent with studies in primary care settings where responsiveness frequently emerges as a major contributor to poor service ratings (Braithwaite *et al.*, 2025; Ogaji *et al.*, 2020). Long waiting time, which was the most commonly cited reason for poor perception in this study, further reinforces this interpretation. Delays in service delivery may be particularly problematic among insured patients where administrative processing may prolong care pathways. These findings suggest that reducing waiting time and improving service efficiency may substantially improve overall quality perceptions.

The finding that both insured and uninsured respondents had similar expectation scores across all SERVQUAL domains is particularly important because it indicates that differences in quality perception were not driven by unequal expectations but rather by actual service experiences. This strengthens the interpretation that observed differences in gap scores represent true differences in perceived quality rather than bias due to differing baseline expectations. Similar findings have been reported in SERVQUAL-based studies where expectation scores were often uniformly high among service users regardless of background, while perception scores varied according to care experiences (Nadi *et al.*, 2016; Alanazi *et al.*, 2023; Karume *et al.*, 2025). This further validates the utility of the SERVQUAL approach in distinguishing expectation-related from experience-related determinants of perceived quality.

Age was found to be a significant predictor of good quality perception, with younger respondents more likely to report good perceived quality than older respondents. This may reflect age-related differences in expectations, healthcare utilization patterns, or tolerance for service limitations. Similar findings have been reported where younger patients tended to rate service quality more positively than older patients, possibly because older respondents often have more frequent interactions with health services and higher expectations regarding continuity and provider responsiveness (Aljohani, 2026; Qirko *et al.*, 2024). However, some studies have reported opposite patterns, suggesting that the influence of age on perceived quality may be context dependent. Nevertheless, the present findings suggest age remains an important determinant of quality perception.

High social class also independently predicted better quality perception in this study. This may reflect differences in health literacy, communication confidence, or ability to navigate service systems among respondents of higher socioeconomic status. Similar associations between socioeconomic status and positive healthcare experiences have been reported in other settings, where higher-income or higher-status respondents were more likely to report satisfaction or favorable quality perceptions (Afriyie *et al.*, 2023). It is also possible that respondents of higher social class accessed services more efficiently or experienced fewer barriers than lower social groups. These findings highlight the need to consider equity dimensions in quality improvement interventions.

The significant variation in perceived quality across health facilities suggests that institutional factors influenced patient experiences. Respondents attending Niger Delta University Teaching Hospital reported the highest proportion of good quality perception, while respondents at Diets Koki Memorial Hospital reported the lowest. This finding suggests that differences in staffing, infrastructure, organizational processes, or patient flow may shape perceptions independently of insurance status. Similar facility-level variation in service quality has been documented in studies showing that institutional performance strongly influences patient perceptions even within the same health system (Yesilada & Direktör, 2010; Agyei *et al.*, 2020). This reinforces the importance of facility-level quality improvement strategies.

The finding that long waiting time, poor staff attitude, drug unavailability, and administrative delays were major reasons for poor quality perception highlights both structural and interpersonal contributors to perceived poor care. Long waiting times have consistently been identified as a major driver of dissatisfaction in health services research and are recognized as indicators of poor service responsiveness and timeliness (WHO, 2018; Mosadeghrad, 2014). Poor staff attitude and weak provider communication also undermine patient trust and satisfaction, consistent with evidence showing that interpersonal care strongly shapes patient experience (Mosadeghrad, 2014). Administrative delays linked to insurance processes further suggest that quality challenges may partly arise from scheme implementation issues rather than clinical care alone. Inefficiencies in administrative procedures and delays in access have been associated with poorer perceptions of service quality and reduced patient confidence in health systems (Odeyemi & Nixon, 2013; WHO, 2018).

Taken together, the findings indicate that quality challenges in public primary care extend beyond financing and reflect deficits in responsiveness, administrative efficiency, interpersonal care, and institutional performance. The finding that uninsured respondents reported better perceived quality than insured respondents suggests that health insurance expansion alone does not guarantee positive patient experiences. This is consistent with growing evidence that progress toward Universal Health Coverage requires not only expanded access but also improvement in quality of care, patient-centeredness, and health system responsiveness (WHO, 2018; Kruk *et al.*, 2018). Poor service quality has been shown to undermine public confidence in health systems even where coverage has expanded (Kruk *et al.*, 2018; Mosadeghrad, 2014). Strengthening waiting-time management, improving provider-patient communication, addressing insurance administrative bottlenecks, and improving facility-level service organization may therefore be critical for improving perceived quality and strengthening confidence in public primary care services (WHO, 2018; Roder-DeWan *et al.*, 2019).

## CONCLUSION

This study showed that significant gaps exist in the perceived quality of primary care services among both insured and uninsured patients, with uninsured respondents reporting better perceptions of care than insured respondents. Although respondents had similar expectations of service quality, deficits in responsiveness, waiting time, provider attitude, and administrative processes contributed to negative quality gap scores. Age, social class, and insurance status significantly influenced quality perception, while facility-level differences further highlighted institutional variations in service delivery. Overall, the findings indicate that improving access through health insurance alone is insufficient without corresponding improvements in service quality and patient-centered care.

## RECOMMENDATIONS

Health facility managers and policymakers should strengthen service responsiveness by reducing waiting time, improving provider-patient communication, and addressing administrative delays associated with insurance processes. Regular monitoring of service quality using patient feedback tools

such as SERVQUAL should be institutionalized, while investments in staffing, drug availability, and facility-level quality improvement interventions should be prioritized to enhance equitable, patient-centered care for both insured and uninsured patients.

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