



REVIEW ARTICLE

# Patient Perceptions of the Impact of the National Health Insurance Scheme on Healthcare Service Delivery in Ghana: A Systematic Review.

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## Abstract

**Background:** Patients in Ghana have conflicting perceptions about the impact of the National Health Insurance Scheme (NHIS) on service delivery. While some acknowledge the beneficial effects of the scheme, others highlight its drawbacks. The objective of this study was to investigate how patients perceive the impact of the NHIS on service delivery in Ghana.

**Methods:** Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines were applied. Searches were conducted in five databases: ScienceDirect, Web of Science, PubMed, ProQuest, and Scopus. Included studies were written in English, published between 2015 and 2024, and peer-reviewed. Two reviewers independently assessed search results, extracted data, and assessed study quality.

**Results:** Out of 250 studies screened, 24 full-text articles were included. Patient perceptions of NHIS were largely positive, especially among rural and low-income groups who saw it as improving affordability and access. In contrast, urban and more educated patients were more critical, citing long wait times, drug shortages, and poor service quality. One study found no significant difference in service quality between insured and uninsured patients ( $p = 0.47$ ). Common themes included financial access (70% of studies), service quality (50%), perceived fairness (50%), provider attitudes (40%), waiting times (30%), and drug availability (50%).

**Conclusion:** The study highlights the perceived benefits of NHIS in Ghana, including improved access to care, enhanced continuity of care, and alleviated financial burden. However, challenges such as negative attitudes of healthcare personnel, delays in accessing care, lack of coverage for critical services, drug unavailability, and concerns about service quality remain.

**Keywords:** impact, national health insurance scheme, patients, perception, service delivery

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## Introduction

PGlobally, especially in sub-Saharan Africa, National Health Insurance (NHI) is considered the lifeblood of Universal Health Coverage <sup>1</sup>. Ghana has implemented several reforms in healthcare financing. Earlier reforms led to reduced utilization of services and increased inequities, prompting the implementation of a social health insurance scheme known as the National Health Insurance Scheme

(NHIS). This initiative aimed to pool and share health risks across the population and reduce direct payment at the point of service delivery <sup>2</sup>.

There are perceived benefits associated with the implementation of the NHIS in Ghana's healthcare system. A study by Christmals and Aidam<sup>1</sup> indicated that the NHIS has helped remove some socio-economic barriers to healthcare by making services accessible and affordable.

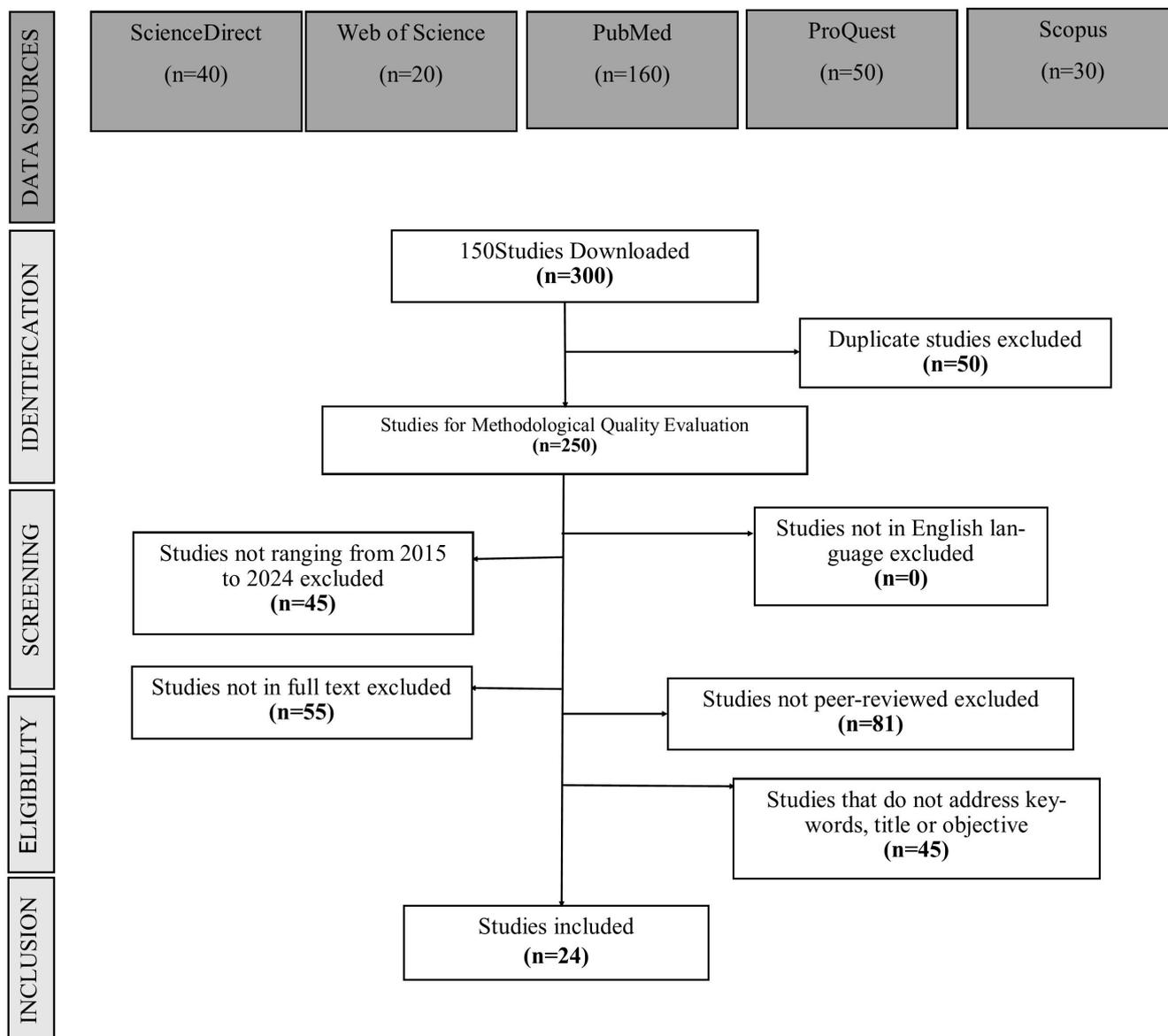


Figure 1. Flow Chart for Preferred Reporting Items for Systematic Reviews and Meta-Analyses

The scheme provides access and financial protection, which have contributed to improved health-seeking behaviors and reduced risky practices such as self-medication. Despite these perceived benefits, the implementation of the NHIS has also been associated with certain challenges in healthcare service delivery <sup>1</sup>.

According to studies by Kipo-Sunyehzi et al.<sup>3</sup> and Zhang et al.<sup>4</sup>, patients in Ghana have expressed conflicting perceptions regarding the impact of NHIS on service delivery. While some acknowledge its beneficial effects in increasing access to healthcare services, others highlight drawbacks such as long waiting times, inadequate drug supplies, and concerns about the quality of care. In addition, Akweongo et al.<sup>5</sup> reported that some insured clients refrained from renewing their NHIS membership due to perceived poor quality healthcare services received during visits to medical facilities. Others claimed that, despite having active membership cards, they were still required to pay for services <sup>5</sup>.

Evaluating how well the NHIS meets the healthcare needs of the population depends largely on patients' perceptions of the system and its impact on service delivery <sup>6</sup>. Although previous studies have examined the impact of NHIS on service delivery in Ghana, less emphasis has been placed on comprehensively synthesizing patient perceptions. Therefore, this study seeks to fill this gap by synthesizing patient perceptions of the impact of the NHIS on healthcare service delivery in Ghana. The findings of this study will help to inform policy decisions and practice by enabling stakeholders to identify areas for healthcare delivery optimization and improvement under the scheme. Ultimately, this will enhance NHIS implementation to better meet the needs of patients <sup>6</sup>.

## Methods

This study aimed to synthesize patient perceptions of the impact of the National Health Insurance Scheme on

Table 1. Quality Assessment (Study Appraisal and Risk of Bias of Included Studies)

Author(s)	Study Design	Meets Inclusion Criteria (5/5)	Risk of Bias
Abredu et al., 2023	Mixed methods	✓	Low
Adisah et al., 2017	Qualitative	✓	Moderate
Nketiah-Amponsah et al., 2019	Quantitative	✓	Low
Baozhen et al., 2019	Quantitative	✓	Moderate
Otieno et al., 2022	Quantitative	✓	Moderate
Zhang et al., 2019	Quantitative	✓	Low
Umar et al., 2020	Quantitative	✓	Low
Dalinjong et al., 2019	Qualitative	✓	Moderate
Thapa et al., 2021	Qualitative	✓	Moderate
Ameyaw et al., 2021	Quantitative	✓	Low
Badu et al., 2019	Qualitative	✓	Moderate
Yaya et al., 2017	Quantitative	✓	Low
Bagnoli et al., 2019	Quantitative	✓	Low
Ayanore et al., 2018	Mixed methods	✓	Low
Duku et al., 2018	Quantitative	✓	Low
Debpuur et al., 2015	Qualitative	✓	Moderate
Alhassan et al., 2015	Qualitative	✓	Moderate
Okoroh et al., 2018	Quantitative	✓	Low
Tindyebeba et al., 2023	Mixed methods	✓	Low
Abuosi et al., 2016	Quantitative	✓	Low
Akweongo et al., 2021	Mixed methods	✓	Moderate
Kanmiki et al., 2019	Quantitative	✓	Low
Mkperedem et al., 2023	Qualitative	✓	Moderate
Andoh-Adjei et al., 2018	Mixed methods	✓	Low

healthcare service delivery in Ghana. The systematic review methodology was applied in this investigation. This method was deemed applicable because it allowed other researchers to evaluate the quality of the study and verify its findings. In addition, a systematic review was appropriate for this study because it is designed to minimize bias and error by using a structured and comprehensive approach to identify, select, and synthesize all available evidence related to the research objective. This investigation was guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines.

#### Inclusion Criteria

A study was considered for inclusion in this review if it was written in English, published between 2015 to 2024, available in full text, peer reviewed, and addressed the keywords, title or objectives of this study. The 2015 starting point was chosen to capture more recent and relevant evidence following key policy reforms and the evolving implementation of National Health Insurance Scheme in Ghana, which was initially launched in 2003.

#### Exclusion Criteria

Studies were excluded if they were conference abstracts, book chapters, editorials, commentaries, grey literature; if they were not written in English, published before 2015; not available in full text or not peer reviewed; or if they did not address the keywords, title or objectives of the study.

#### Identifying Relevant Studies (Information Sources)

Five international databases were used to gather English-language literature published between 2015 and 2024: ScienceDirect, Web of Science, PubMed, ProQuest and Scopus. These databases were purposefully selected for their extensive coverage and standardized indexing of relevant studies. Regional databases, such as African Journals Online (AJOL) were excluded to maintain consistency and accessibility.

To identify relevant studies that met the inclusion criteria, key search terms and phrases were combined using Boolean operators (AND, OR, NOT). The main keywords and phrases included: “National Health Insurance Scheme (NHIS)”, “history”, “implementation”, “benefits”, “challenges”, “impact”, “patients”, “perceptions”, “healthcare”, “service delivery”, and “Ghana”. Search combinations were tailored for each database. For PubMed, ScienceDirect, ProQuest, and Web of Science, combinations included phrases such as: “Implementation of the National Health Insurance Scheme in Ghana”, “History of the National Health Insurance Scheme in Ghana”, “Benefits of the National Health Insurance Scheme in Ghana”, “Challenges of the National Health Insurance Scheme in Ghana”, and “Patients Perceptions of the Impact of the National Health Insurance Scheme on Service Delivery”. In Scopus, the search focused on the later three combinations: benefits, challenges, and patient perceptions of NHIS impact on service delivery.

## Study Selection

The selection of eligible studies adhered to the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) guidelines. From the downloaded studies, 50 were eliminated due to duplication using Mendeley referencing software. The titles and abstracts were reviewed and agreement was reached on those requiring full screening. The full screening was conducted following the inclusion and exclusion criteria. Figure 1 shows the PRISMA flow diagram for the process of selecting eligible studies.

## Study Appraisal

There were 250 remaining studies that qualified for evaluation under methodological quality. The methodological quality of all included studies was assessed using the Joanna Briggs Institute (JBI) Critical Appraisal Tools based on the study design. All included studies met the inclusion criteria and were appraised according. The results are summarized in Table 1. Five questions were posed to evaluate the 250 studies. The questions were:

1. Is the article written in English language?
2. Is the article published within the year range of 2015 to 2024?
3. Is the article available in full text?
4. Is the article peer-reviewed?
5. Does the article address the keywords, title, or objectives of this study?

For every question asked, a "Yes" or "No" response was required. This was a systematic way to assess the quality of the research. This evaluation included studies that answered "Yes" to all five questions. Following the evaluation, 24 studies were included in this review.

## Risk of Bias Assessment

In addition to meeting the predefined inclusion criteria, each included study was assessed for risk of bias using simplified criteria adapted from the ROBIS tool. This evaluation considered the clarity of the research objectives, the appropriateness of the study design, transparency in methodology, data quality control, and completeness of reporting. Studies were categorized as having a low, moderate, or high risk of bias. The results of this appraisal are presented in Table 1.

## Data Extraction (Charting data)

Two independent reviewers extracted data from the included studies using a standardized and piloted charting form that captured publication details (year, authors, study design, and title) and key findings related to patient perceptions of the NHIS and its impact on service delivery. Although inter-rater reliability was not quantified, consistency was ensured through adherence to the study protocol, and discrepancies were resolved by consensus. The charting form was piloted on ten studies that were not included in the final review to enhance clarity and reliability.

## Data Synthesis

The findings from the included studies concerning patient perceptions of the impact of the NHIS on service delivery were synthesized to identify patterns and themes. To achieve this, the studies were carefully reviewed to identify key subject areas and recurring themes. The identified subject areas and themes were re-examined to gain an in-depth understanding of the results. These subject areas and themes were then classified based on their associations and relatedness.

## Results

This section of the systematic review presents the findings.

### Search Results

Table 2 shows the distribution of downloaded studies across the five selected databases and the included studies with their percentages. A total of 300 studies were downloaded following a search of the five databases. Of these, 20 were from Web of Science, 160 from PubMed, 50 from ProQuest, 40 from ScienceDirect, and 30 from Scopus.

Fifty (50) studies were excluded for being duplicates, 81 studies were excluded for not being peer-reviewed journal

Table 2. Distribution of Downloaded, Included Studies and Percentages of Included Studies

Databases	Number of downloaded studies	Number of Included Studies	% of Included Studies
Science Direct	40	5	21
Web of Science	20	4	17
PubMed	160	8	33
ProQuest	50	5	21
Scopus	30	2	8

articles, 55 studies were excluded for not being available in full text articles, 45 studies were excluded for not being published between 2015 and 2024, and 45 studies were excluded for not addressing keywords, title and objectives of the study were. No study was excluded for not being written in English. Twenty-four (24) studies were included in this review.

### Themes Generated from the Data

This review identified six main themes in patient perceptions of the impact of NHIS on healthcare delivery in Ghana: financial access, fairness of care, quality of care, attitudes of healthcare professionals, waiting times, and availability of drugs.

About 70% of the studies reported improved financial access through reduced costs and better service continuity, although 40% noted persistent out-of-pocket payments for drugs and tests, especially among vulnerable groups<sup>6,7</sup>. Perceptions of fairness of care varied, with poorer rural patients generally expressing more positive views than wealthier urban patients (reported in 50% of studies)<sup>6</sup>.

Views on quality of care were mixed: approximately 50% of the studies reported patient satisfaction, while the remainder highlighted issues such as discrimination, claim

Table 3. The perception of patients about the impact of NHIS on service delivery

Year of publication	Authors	Study Design	Study Title	Key findings
2023	Abredu et al.	Mixed Methods	Factors influencing the free maternal health care policy under the national health insurance scheme provision for skilled delivery services in Ghana: a narrative literature review	Challenges like out-of-pocket payments for services excluded from NHIS coverage, as well as the absence of coverage for critical services like ambulance usage during emergencies, contribute to the mixed views of patients on the impact of the scheme on service delivery.
2017	Adisah- Atta.	Qualitative	Financing Health Care in Ghana: Are Ghanaians Willing to Pay Higher Taxes for Better Health Care? Findings from Afrobarometer	Ghanaians have voiced differing opinions regarding the effects of the NHIS on service delivery. Overall patient satisfaction with the NHIS is influenced by their experiences with drug availability, waiting times, and service quality.
2019	Nketiah- Amponsah et al.	Quantitative	The perception subscribers of quality of services provided by the National Health Insurance Scheme in Ghana - what are the correlates?	Although many people are benefiting from the NHIS, there are worries about how this may affect the quality of care. Over time, patients have complained about increased waiting times, higher costs, and decreased satisfaction with medical care.
				An assessment of the NHIS by both insured and uninsured clients revealed poor quality of services provided to insured clients by the NHIS-accredited facilities in the areas of stock-out of essential drugs and bad attitude of staff as some of the marked drawbacks of the scheme. Insured clients indicated that essential drugs are often not available at the health facility.
2019	Baozhen et al.	Quantitative	Assessing Factors Affecting the Patronage of Health Insurance Schemes: An Evidence of Ghana	There are differences in views of patients on how the NHIS affects service delivery, and some are not happy with the quality of care they received through the program. Individuals who pay cash for care instead of utilizing their insurance cards have reportedly received better care.
2022	Oreieno et al.	Quantitative	Health services availability and readiness moderate cash transfer impacts on health insurance enrolment: evidence from the LEAP 1000 cash transfer program in Ghana	The perception patients of the NHIS in Ghana are influenced by factors such as service availability, quality of care, and administrative processes. Some individuals may perceive the NHIS positively if they experience improved access to healthcare service without financial burden. However, challenges in service delivery, including long waiting times, limited facility resources and perceived service quality issues, can lead to negative perceptions of the NHIS.
2019	Zhang et al.	Quantitative	Trends and projections of universal health coverage indicators in Ghana, 1995-2030: A national and subnational study	Patients in Ghana have conflicting opinions about the National Health Insurance Scheme (NHIS). While some acknowledge the schemes beneficial effects on increasing access to healthcare services, others draw attention to drawbacks such as lengthy waiting times, shortage in drug supply, and problems with the quality of care.
2020	Umar et al	Quantitative	The shared experiences of insured members and the uninsured in health care access and utilization under national health insurance scheme in Ghana: Evidence from the Hohoe Municipality	Patients have voiced issues over the attitude of healthcare personnel, specifically pointing out that public health institutions tend to be ruder and more disrespectful than private ones.
2017	Dalinyong et al	Qualitative	The association between health insurance status and utilization of health services in rural Northern Ghana: evidence from the introduction of the National Health Insurance Scheme	The perception of patients of the National Health Insurance Program (NHIS) differs, some are happy that the program may offer reasonably priced medical services, while others complain about issues like long waiting times, difficulty in accessing specialized care, and drug shortages.

Table 3. The perception of patients about the impact of NHIS on service delivery

Year of publication	Authors	Study Design	Study Title	Key findings
2021	Thapa et al	Qualitative	Perception Towards National Health Insurance Scheme among Enrollees of Central Terai: A qualitative Study	Respondents were dissatisfied with the services they received. Their concerns were about the quality of care they received, regarding drug availability, interaction between patients and providers when seeking medical care, and long waiting times.
2021	Ameyaw et al	Quantitative	Is the National Health Insurance Scheme helping pregnant women in accessing health services? Analysis of the 2014 Ghana demographic and Health survey	Regarding NHIS subscription, we discovered that women who had enrolled in the program were more likely to emphasize how it helps expectant mothers get access to healthcare.
2019	Badu et al	Qualitative	Perceived satisfaction with health services under National Health Insurance Scheme: the perspectives of clients	Eighty-one percent of insured clients felt that the NHIS do not cover all medical expenses.
2017	Yaya et al	Quantitative	Urban-rural difference in satisfaction with primary healthcare services in Ghana	The were shortages of drug supply with the NHIS which led to insured clients being dissatisfied with the services they received and were discouraged from enrolling on the scheme.
2019	Bagnoli et al	Quantitative	Does health insurance improve health for all? Heterogeneous effects on children in Ghana	Respondents believed that it removes a financial burden for lower-income households, which helps in the improvement of health among insured children.
2018	Ayanore et al	Mixed Methods	Predictors of Health Care Service Quality among Women Insured Under National Health Insurance Scheme in Ghana	The view of patients of low quality for meeting their health care demands will definitely equate to patients making Out-of-Pocket Payment (OOP).
2015	Debpuur et al	Qualitative	An exploration of moral hazard behaviors under the national health insurance scheme in Northern Ghana: a qualitative study	Patients who were insured were discouraged from going to seek medical care at the health facilities because they have to join long queues as a result of the large number of patients seeking medical care.
2015	Alhassan et al	Qualitative	Comparison of perceived and technical Healthcare quality in primary health Facilities: Implications For	Clients were not satisfied with the quality of services they received.
2018	Okoroh et al	Quantitative	Evaluating the impact of the national health insurance scheme of Ghana on out-of-pocket expenditures: a systematic review	All insured members made Out-Of-Pocket payment for medicines, although they paid less as compared to the uninsured clients.
2023	Tindyebwa et al	Mixed Methods	Expectations of clients, insurers, and providers: a qualitative responsiveness assessment among private health insurance sector in Kampala-Uganda	Clients experienced low service care responsiveness which was characterized by long waiting times.
2016	Abuosi et al	Quantitative	Health insurance and quality of care: Comparing perceptions of quality between insured and uninsured patients in hospitals in Ghana	Both the insured and the uninsured had equal positive perception regarding the quality of services they received. However, the insured paid less to access health-care as compared to the uninsured.
2021	Akweongo et al	Mixed Methods	Out-of-pocket payments by insured clients for health care under the national health insurance scheme in Ghana	About 47% of the respondents who were insured reported out-of-pocket payments of Out-Patient Department services.
2019	Kanniki et al	Quantitative	Out-of-pocket payment for primary healthcare in the era of national health insurance: Evidence from northern Ghana	The NHIS has reduced the financial burden of accessing healthcare by reducing the out-of-pocket payments made by patients.
2023	Mkperedem et al	Qualitative	Perception among NHIS-HMO Enrollees of the Attitudes of Medical Personnel during Outpatient Care in Lagos Hospitals	Some clients had a positive perception of the overall attitude of healthcare professionals during out-patient care. They said the attitudes of the medical personnel towards them were humane and respectful.
2018	Duku et al	Quantitative	Perceptions of healthcare quality in Ghana: Does health insurance status matter?	People sign up for health insurance in order to protect themselves financially from having to pay a disproportionate amount of money out of pocket for high-quality medical care.
2018	Andoh-Adjei et al	Mixed Methods	Does a provider payment method affect membership retention in a health insurance scheme? a mixed method study of capitation payment for primary care in Ghana.	Clients who were insured showed dissatisfaction with the services they received because of long waiting time, inadequate provision of information, partial queuing system, bad attitude of staff, and poor quality of drugs available at accredited facilities. The respondents stated that the speed at which the NHIS processes claims from healthcare providers affects the quality of care.

delays, and poor services in public facilities<sup>8,9,7</sup>. Attitudes of healthcare professionals also varied, with about 40% of studies reporting respectful behavior, while others documented rudeness, particularly in public facilities<sup>10,11</sup>.

Waiting times and drug shortages were common concerns, reported in approximately 30% and 50% of studies, respectively, including long queues and limited drug availability<sup>12,13</sup>. Additional barriers, such as incomplete service coverage and dissatisfaction leading some insured patients to seek private care, were noted in 35% of studies<sup>14,15</sup>.

## Discussion

The findings from this study revealed that patients have different views regarding the impact of the NHIS on healthcare service delivery in Ghana. These differences in perception are influenced by access to healthcare services (service availability), quality of care, financial access, service coverage, waiting times, and the attitudes of healthcare personnel. Other influencing factors include demographic characteristics such as socio-economic status, wealth status, education level and gender<sup>6,13,16</sup>.

Some patients had a positive perception of the NHIS because they perceived it as enhancing the continuity of healthcare by reducing the financial burden on patients. Andoh-Adjei et al.<sup>6</sup> and Bagnoli et al.<sup>17</sup> also noted that poorer, less-educated rural patients tended to view NHIS services more favorably, likely because they lack other healthcare alternatives for comparison. In contrast, their urban counterparts, who tend to be more educated and wealthier, were more critical of NHIS service quality.

Patients generally had a positive perception of the NHIS, as it is recognized to enabling insured clients to benefit from reduced healthcare costs and improved access to healthcare services<sup>7,18,19</sup>. This is consistent with a study by Christmals and Aidam<sup>1</sup> which indicated that NHIS helps improve the accessibility and affordability of healthcare services. In addition, a study by Dalinjong and Laar<sup>20</sup> noted that some patients were please that the scheme offered reasonably priced medical services. However, insured clients still made out-of-pocket payments, although these were lower compared to those uninsured clients<sup>8,21</sup>. It was also observed that pregnant women had greater access to NHIS healthcare services<sup>19</sup>.

In contrast, despite the free maternal healthcare policy integrated into the NHIS, studies by Abredu et al.<sup>14</sup>, Andoh-Adjei et al.<sup>6</sup>, and Adisah-Atta<sup>22</sup> reported that the costs for some services such as drugs, laboratory tests, ultrasounds, and emergency transportation, are not fully covered by the scheme. Women who cannot afford these out-of-pocket payments are deprived of accessing essential maternal health services, which contradicts the intended “free care” policy under the NHIS, thus, potentially undermining its goal of financial risk protection.

Patients had a positive perception of the attitudes of healthcare professionals. They reported that medical personnel treated them were humanely and respectfully<sup>10</sup>, which contrasts with the findings of Duku et al.<sup>11</sup>, Nketiah-

Amponsah et al.<sup>13</sup>, and Umar et al.<sup>7</sup>, who indicated that insured clients were dissatisfied with services due to poor attitude of the healthcare staff. Patients also noted that healthcare personnel in public health institutions tend to be ruder and less respectful than those in private institutions. Measures such as in-service training and corrective (sanction) policies should be implemented to ensure that the attitudes and behavior of healthcare professionals align with the standards, procedures, and principles governing their work.

Both the insured and the uninsured patients had equally positive perceptions regarding the quality of services they received<sup>8</sup>. However, others expressed dissatisfaction with the quality of services<sup>9,17,23</sup>. Challenges reported included experiences of discrimination by healthcare workers against insured clients, lack of coverage for critical services such as ambulance use during emergencies, and perceived poor quality of care at government healthcare facilities<sup>6,7,11,14,24,25</sup>. Some patients noted that the perceived poor quality of care could be influenced by the speed at which the NHIS processes claims from healthcare providers, stating that the services they receive are affected by delays in claims processing<sup>6</sup>.

Furthermore, some patients were reluctant to renew their NHIS membership due to delays in accessing care with NHIS cards, concerns about the overall quality of healthcare under the scheme, and decreased satisfaction with medical services. Some insured patients even opted to pay higher fees at private facilities for what they perceived as better-quality care<sup>7,13,26</sup>. Regarding subscribers who opted to pay for healthcare services, a study by Baozhen et al.<sup>15</sup> noted that individuals who made out-of-pocket payments instead of utilizing their insurance cards reportedly received better care.

Insured patients were discouraged from seeking medical care at health facilities because they had to join long queues due to the large number of people seeking medical care<sup>12</sup>. It was also found that insured clients expressed dissatisfaction because essential drugs were often unavailable at the facilities, and those that were available were frequently of poor quality<sup>7,11,13,27</sup>.

The findings of this study indicate that patient perceptions of the impact of the NHIS on service delivery vary. Some patients reported positive perceptions of the scheme, while others highlighted challenges such as additional charges, long waiting times, discrimination against insured clients, lack of coverage for critical services, and concerns about the quality of care. These findings suggest that, although the implementation of the NHIS in Ghana has had some perceived positive impact on healthcare service delivery, patient concerns regarding the scheme still require attention to enhance its effectiveness.

## Implications for Policy, Practice, and Future Research

This study explored patient perceptions of the impact of the NHIS on service delivery in Ghana. The findings reveal that patient perceptions of NHIS vary. These results have several policy implications. Policymakers and healthcare administrators should address the identified challenges to improve the NHIS's effectiveness in delivering affordable,

high-quality healthcare to all Ghanaians. Measures must be implemented to ensure that healthcare professionals' attitudes and behaviors align with established standards, procedures, and principles. For example, incentive programs could motivate providers to maintain professionalism and deliver respectful care. Regular in-service training and monitoring of staff conduct can also promote more empathetic patient interactions.

To reduce long waiting times, additional healthcare providers should be recruited to improve the provider-to-patient ratio. Additionally, streamlining administrative processes and expediting claims reimbursement can minimize delays in service delivery. Policy interventions should also consider the specific challenges faced by rural populations, such as limited facilities, longer travel times, and reduced access to skilled providers. Rural patients often reported more favourable views of the NHIS, likely due to fewer alternatives, whereas urban patients, with more options, tended to be more critical. Policy efforts should address rural barriers while also enhancing service quality in urban areas.

Furthermore, mechanisms should be established to monitor and evaluate the scheme's operations and to collect feedback from subscribers to identify areas needing improvement and guide reforms. Future research should explore strategies necessary for the NHIS to achieve its intended goals.

### Limitations of the Study

The study acknowledges certain limitations, such as the exclusion of non-English studies, as the linguistic diversity in Ghana may influence perceptions. In addition, the exclusion of studies published before 2015 may limit the scope of the review. The study also excluded grey literature, which may have introduced publication bias and limited the scope of the findings by omitting relevant but non-peer-reviewed data. However, the findings from this study remain relevant to the National Health Insurance Scheme, the Ghana Health Service, and the Ministry of Health for supporting the effective delivery of healthcare services under the National Health Insurance Scheme in Ghana.

## Conclusion

This study provides a comprehensive overview of the diverse perceptions patients regarding the NHIS and its impact of on service delivery. The study highlights perceived benefits such as improved access to care, enhanced continuity of care, and reduced financial burden on patients. However, it also identifies perceived challenges including the negative attitudes of healthcare personnel, delays in accessing care, concerns about service quality and coverage scope, long waiting times, and the unavailability of drugs.

Based on the findings, it is recommended that policymakers and healthcare administrators prioritize addressing the identified challenges to optimize the effectiveness of the NHIS in providing affordable and quality healthcare services to all Ghanaians. Measures should be taken to curb

the negative provider attitudes, streamline access to care, improve service quality, and expand the scope of coverage to meet the diverse healthcare needs of the population.

Furthermore, implementing mechanisms for ongoing monitoring and evaluation, as well as soliciting feedback from NHIS subscribers, can help identify areas for improvement and ensure that the scheme remains responsive to the evolving needs and expectations of beneficiaries. By addressing these recommendations, policymakers can enhance the ability of the NHIS to achieve its objectives of improving healthcare accessibility, affordability, and quality for all Ghanaians. Implementing these measures will help the NHIS to remain relevant and responsive to subscribers' needs and contribute to the overall improvement of healthcare services in Ghana.

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### Authors' contributions

Conceptualization, NKM and EO; formal analysis, investigation, and data synthesis, EO; formal data analysis and results interpretation, EO; writing, original draft preparation, EO; writing, review and editing, EO and NKM. All authors have read and agreed to the published version of the manuscript.

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### Competing interests

The authors declare that they have no competing interests

### Availability of data and materials

Pieces of Literature analyzed during the current study are available online and can also be made available through the corresponding author upon request.

### Declarations

Ethical approval and consent to participate

Not applicable

Consent for publication

Not applicable.

### Abbreviations

NHI National Health Insurance

NHIS National Health Insurance Scheme

PRISMA Preferred Reporting Items for Systematic Reviews and Meta-Analyses

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