Nigerian Medical Journal
NIGERIA MEDICAL ASSOCIATION
Print ISSN 0300-1652, E-ISSN 2229-774X

Original Article

An Assessment of Enrollees' Knowledge and Satisfaction with Delta State Contributory Health Scheme: A Cross- Sectional Survey of Civil Servants in Delta State, Nigeria

***Emmanuel Nonyelum Onyebadi[1], Ibobo Mike Enemuwe[1,2,] Nyemike Simeon Awunor[1,2,] Patrick Oyibo[1,3]**

[1] Department of Community Medicine, Delta State University, Abraka, Delta State, Nigeria. [2] Department of Community Medicine, Delta State University Teaching Hospital, Oghara, Delta State, Nigeria.[3]Health Services Research and Management Division, School of Health and Psychological Sciences City, University of London, United Kingdom

Abstract

Background: Delta State Contributory Health Scheme (DSCHS) was established to provide quality and affordable healthcare services to all Deltans, irrespective of socioeconomic status and geographical location. This study assessed the knowledge and satisfaction of formal sector enrollees with the Delta State Contributory Health scheme.
Methodology: This was a cross-sectional descriptive study involving 400 public/civil servants enrolled in DSCHS using a multistage sampling technique. Data was collected using an interviewer-administered structured questionnaire and was analyzed using IBM SPSS version 25.0 software.
Results: The study revealed that 207 (51.7%) of the respondents were males, while 193 (48.3%) were females. Two hundred and five (51.2%) of the respondents were within the age group of 43 – 52 years, and 353 (88.2%) of the respondents had tertiary education. Overall, 296 (74.0%) of the respondents had good knowledge, and 104 (26.0%) had poor knowledge of DSCHS; while 138 (52.1%) of the respondents were unsatisfied with DSCHS and 127 (47.9%) were satisfied with the scheme. Age (X^2 = 19.67; P<0.001), gender (X^2 = 8.53; P=0.004), education (X^2 = 20.52; P<0.001), marital status (X^2 = 14.13; P=0.001), religion (X^2 = 13.12; P=0.001) and years of working experience (X^2 = 39.66; P<0.001) was significantly associated with knowledge of DSCHS. The factors significantly associated with satisfaction with DSCHS were ethnicity (X^2 = 14.39; P=0.013) and years of working experience (X^2 = 11.23; P=0.024).
Conclusion: The majority of the study participants had good knowledge regarding DSCHS but were unsatisfied with the level of services provided by the scheme. It is therefore recommended that Delta State Contributory Health Commission should review its benefit package and urgently scale up services to improve enrollees' satisfaction with the scheme.
Keywords: Knowledge, satisfaction, contributory health scheme, Delta state, Nigeria

***Correspondence**: Emmanuel Nonyelum Onyebadi, Department of Community Medicine, Delta State University, Abraka.
Email: onyebadiemmanuel@gmail.com

How to cite: Onyebadi EN, Enemuwe IM, Awunor NS, Oyibo PG. An Assessment of Enrollees' Knowledge and Satisfaction with Delta State Contributory Health Scheme: A Cross- Sectional Survey of Civil Servants in Delta State, Nigeria. Niger Med J 2023; 64 (5):680-691.

Quick Response Code:

Introduction

Several low and middle-income countries (LMICs) have recognized the challenges of sustaining adequate healthcare finance, particularly for the poor [1],[2]. As a result, policymakers all over the world and other stakeholders have advocated for several solutions, including, but not limited to, several types of health insurance systems, one of which is social health insurance (SHI) [3]. The World Health Organization (WHO) passed a resolution supporting social health insurance as one of the strategies for mobilizing more resources for healthcare service delivery, risk pooling, increasing access to healthcare for the poor, and delivering high-quality healthcare, particularly in low-income countries [4]. Providing adequate health services for preserving and promoting life has always been a concern for all responsive Governments worldwide. However, in many African countries, including Nigeria, health insurance is a relatively new notion [5] even though it has been acknowledged as the most sustainable method for achieving universal health coverage. Continued reliance on direct payments, including user fees, according to the World Health Organization (WHO), is by far the most significant impediment to progress toward universal health care [6].

As part of the accelerated efforts toward the realization of the United Nation's Sustainable Development Goals, especially SDG Goal 3 on Good Health and well-being for all, the government of Delta State established the Delta State Contributory Health Commission (DSCHC) to improve physical and financial access to quality health care services for all residents of Delta state [7]. The Commission (DSCHC) is a corporate body established in 2015 by the law of Delta state, with the vision of providing "a Contributory Health Scheme that is dynamic, effective and efficient with the capacity to enhance and ensure a vibrant and sustainable healthcare financing security for all residents of Delta State irrespective of their socioeconomic status" [7]. The commission is empowered by law to manage, implement and supervise the administration of Delta State Contributory Health Scheme (DSCHS). The scheme (DSCHS) is compulsory for all residents of the State except those covered by the National Health Insurance Scheme (NHIS). It has 4 Enrollee Health Plans, namely: formal health plan, informal health plan, equity health plan and private health plan [8]. The Formal Health Plan is for those whose premiums are paid via Payroll percentage deductions covering a husband, wife, and 4 children below 18 years with a counterpart employer contribution for each principal enrollee, while the Informal Health Plan is for those whose premium of N7,000/year/Enrollee is paid per individual enrollee covering only the individual enrollee [9]. Equity Health Plan is for those belonging to the vulnerable group (pregnant women, children under 5 years, elderly above 65 Years, physically and mentally challenged, and all residents of Delta State classified as Poor). The Delta State Government pays their Premium of N7,000/year/Enrollee. The Private Health Plan is for individuals who subscribe to pay an extra premium for extra healthcare service needs under the DSCHS [9].

The DSCHC commenced operation of the scheme (DSCHS) on the 1st of January, 2017, and has provided service to over 1,044,306 Enrollees (approx. 15% of the estimated Delta State population) in 4 years [9]. The DSCHC currently has 478 accredited public and private healthcare facilities (HCFs) for primary and secondary healthcare services across the State. However, there seems to be a growing dissatisfaction among enrollees. It has also been observed that most civil servants are still hesitant to adopt and utilize the scheme despite its availability [10]. There is also a current dearth of literature on knowledge and satisfaction with DSCHS since it started operation about six years ago. This study, therefore, aimed to assess the knowledge and satisfaction of formal sector enrollees with Delta State Contributory Health Scheme in Delta State, Nigeria.

Materials and Methods

Study Area: The study was conducted in Delta State, an oil and agricultural-producing state in the south-south geo-political zone of Nigeria. The State has an estimated population of 4,112,445 (males: 2,069,309; females: 2,043,136) persons [[11]]. The capital city is Asaba, located at the northern end of the State with an estimated 762 square kilometres (294 sq mi). Warri is the economic nerve centre of the State, the most populated, and it is located at the southern end of the State. Delta State has 34 ministries, departments and agencies in the State's civil/public service [[12]]. The State has two tertiary health facilities located in Delta North (Federal Medical Center, Asaba) and Delta Central (Delta State University Teaching Hospital, Oghara) senatorial districts of the State, respectively. It has 64 secondary health facilities and 445 primary health centres spread across the three senatorial districts of the State.

Study Design: This was a descriptive cross-sectional study conducted to assess the knowledge and satisfaction of enrollees with DSCHS.

Study population: The study population comprised of Delta state civil/public servants who are enrolled with the Delta state contributory health commission. Those enrolled under the national health insurance scheme were excluded from the study.

Sample size determination: The minimum sample size was determined using Cochran's formula [[13]].Using a standard normal deviate at 95% confidence interval, Z=1.96, and assuming a maximum variability of 50%, the proportion of interest, P=0.5, with the margin of error, d=0.05, the calculated sample size was 384. However, considering a non-response rate of 10%, the sample size for the study was increased to 400.

Sampling technique: The multi-stage sampling technique was used for this study. In the first stage, 22 MDAs (20 in Asaba and one each from the two remaining senatorial districts) were randomly selected from a list of 34 MDAs in Delta state civil/public service. However, MDAs selected in Asaba were excluded from the selection process in Delta Central and Delta South senatorial districts, respectively. In the second stage, all civil/public servants in the selected MDAs who gave their consent and met the inclusion criteria for the study were interviewed consecutively until the sample size was completed.

Research instruments and data collection: Data was collected using a pre-tested, structured questionnaire, which was interviewer-administered. The questionnaire was based on the objectives of the study and elicited information on socio-demographic characteristics, knowledge about Delta state contributory healthcare scheme and satisfaction of respondents with the DSCHS. Data was collected from participants during working hours from their various offices.

Method of Data Analysis: Data obtained was analyzed using IBM SPSS version 25.0 software. Both descriptive and inferential statistics were done. Bivariate analysis using chi-square test was conducted, and statistical significance set at $p < 0.05$. Nine parameters were used to assess knowledge of Delta State Contributory Health Care Scheme. The responses were summed and graded. Respondents who scored from 0-4 were graded as poor knowledge, while those scoring 5-9 were graded as good knowledge. Nine parameters were used to assess the satisfaction of participants utilizing the Delta State Contributory Health Care Scheme. A three-point Likert scale was used to assess the responses provided and scored as follows: Yes (2), Neutral (1) and No (0). Total score was computed and converted to percentage and grouped as follows: Satisfied ≥ 50% and Unsatisfied as < 50%.

Ethical approval: Ethical approval was obtained from the Health Research Ethics Committee (HREC), Delta State University Teaching Hospital (DELSUTH HREC Approval Number: HERC/PAN/2022/047/0491). Written permission was obtained from the Civil Service Commission, and written informed consent was obtained from each study participant.

Results

Socio-demographic characteristics of respondents: The sex distribution of respondents showed that 207 (51.7%) of the respondents were males while 193 (48.3%) were females. Two hundred and five (51.2%) of the respondents were within the age group of 43 – 52 years, 109 (27.3%) were in the age group of 33 – 42 years, 59 (14.8%) were in the age group of 22 – 32 years, while 27 (6.8%) were above 52 years of age. Furthermore, 353 (88.2%) of the respondents had tertiary education, 39 (9.8%) had secondary level of education, and 8 (2.0%) had only primary level of education. Three hundred and twenty-four (81.0%) of respondents were married, 70 (17.5%) were single, and 6 (1.5%) were divorcees/widows. A great majority i.e. 384 (96.0%) of respondents were Christians, 13 (3.3%) were Muslim and 3 (0.7%) belonged to other religions. Regarding the ethnic distribution of respondents, 177 (44.3%) were from the Igbo ethnic group, 103 (25.8%) were Urhobo's, 35 (8.8%) were Isoko's and Itsekiri respectively, 28 (7.0%) and 22 (5.5%) were from Ijaw and other ethnic groups respectively. Regarding the years of work experience, 108 (27.0%) of respondents had been working for 11 – 15 years, 87 (21.8%) for 21 years and above, while 71 (17.8%), 70 (17.5%), 64 (16.0%) had been working for 6 – 10 years, 0 – 5 years and 16 – 20 years respectively

Table 1: Socio-demographic characteristics of respondents (N = 400)

Variable	Frequency	Percentage
Gender		
Male	207	51.7
Female	193	48.3
Age group		
22 – 32	59	14.8
33 – 42	109	27.3
43 – 52	205	51.2
> 52	27	6.8
Education		
Primary	8	2.0
Secondary	39	9.8
Tertiary	353	88.2
Marital Status		
Single	70	17.5
Married	324	81.0
Divorced/Widow	6	1.5
Religion		
Christian	384	96.0
Muslim	13	3.3

Others	3	0.7
Ethnicity		
Urhobo	103	25.8
Igbo	177	44.3
Isoko	35	8.8
Ijaw	28	7.0
Itsekiri	35	8.8
Others	22	5.5
Years of Working Experience		
0 – 5	70	17.5
6 – 10	71	17.8
11 – 15	108	27.0
16 – 20	64	16.0
21 and above	87	21.8

Knowledge of Delta State Contributory Health Care Scheme (DSCHS): Two hundred and seven (51.7%) respondents know the meaning of Health insurance, 328 (82.0%) know what DSCHS entails, 357 (89.3%) know the number of dependents the principal enrolee are entitled to care under the scheme, 351 (87.8%) know one of the benefits of DSCHS and 310 (77.5%) know at least one of the role of DSCHS (table 2). Overall, 296 (74.0%) of the respondents had good knowledge of DSCHS, while 104 (26.0%) had poor knowledge of DSCHS

Table 2: Knowledge of Delta State Contributory Health Care Scheme (DSCHS)

Variable	Frequency	Percentage
Know the meaning of Health Insurance		
Yes	207	51.7
No	193	48.3
Know what Delta State Contributory Health Care Scheme entails.		
Yes	328	82.0
No	72	18.0
Know the number of children or dependents the Principal enrollee are entitled to care under the scheme		
Yes	357	89.3
No	43	10.7
Know one of the potential benefits enrollees derive from Delta State Contributory Health Care Scheme		
Yes	351	87.8
No	49	12.3
Know at least one of the role of DSCHS		
Yes	310	77.5

No	90	22.5
Overall knowledge of DSCHS		
Good knowledge	296	74.0
Poor knowledge	104	26.0

Satisfaction with DSCHS: Majority (265; 66.3%) of respondents have accessed care at least once under DSCHS, while 135 (33.7%) have never accessed care under the scheme. Of the 265 respondents who had accessed the DSCHS, 117 (44.2%) were satisfied with the attitude of healthcare staff, while 104 (26.0%) were satisfied with the quality of healthcare staff. Furthermore, 70 (26.4%) of the respondents were satisfied with the waiting time, while 111 (41.9%) were satisfied with the administrative process, and 60 (20.6%) were satisfied with the referral chain. Although 150 (56.6%) of the respondents were satisfied with their service provider (health facility), 82 (30.9%) and 55 (20.8%) of respondents were satisfied with the quality of care received and scope of service provided by the scheme respectively. However, 116 (43.8%) of the respondents were satisfied with the amount deducted monthly (table 3). Overall, 138 (52.1%) of the respondents were unsatisfied with the DSCHS, while 127 (47.9%) were satisfied

Table 3: Satisfaction with DSCHS

Variable	Frequency (n = 265)	Percentage
Satisfied with the attitude of Health care staff		
Yes	117	44.2
No	62	23.4
Neutral	86	32.5
Satisfied with the quality of Health care staff		
Yes	104	26.0
No	59	14.8
Neutral	102	25.5
Satisfied with the waiting time		
Yes	70	26.4
No	112	42.3
Neutral	83	31.3
Satisfied with the scope of services provided by the scheme		
Yes	55	20.8
No	123	46.4
Neutral	87	32.8
Satisfied with the administrative process		
Yes	111	41.9
No	56	21.1
Neutral	98	37.0
Satisfied with the quality of care received		
Yes	82	30.9
No	87	32.8
Neutral	96	36.2
Satisfied with the referral chain of DSCHS		

programmes		
Yes	60	22.6
No	82	30.9
Neutral	123	46.4
Satisfied with the service provider (health facility)		
Yes	150	56.6
No	115	43.4
Satisfied with the amount deducted monthly		
Yes	116	43.8
No	149	56.2
Overall Satisfaction		
Satisfied	127	47.9
Unsatisfied	138	52.1

Factors associated with knowledge and satisfaction with DSCHS: There was a statistically significant association between age (X^2 = 19.67; P<0.001), gender (X^2 = 8.53; P=0.004), education (X^2 = 20.52; P<0.001), marital status (X^2 = 14.13; P=0.001), religion (X^2 = 13.12; P=0.001), years of working experience (X^2 = 39.66; P<0.001), and knowledge of DSCHS, while there was no statistically significant association between ethnicity (X^2 = 7.24; P=0.203) and knowledge of DSCHS (Table 4). Furthermore, there was no statistically significant association between age (X^2 = 2.19; P=0.532), gender (X^2 = 0.69; P=0.460), education (X^2 = 1.31; P=0.520), marital status (X^2 = 1.32; P=0.516), religion (X^2 = 3.54; P=0.171), knowledge of DSCHS (X^2 = 3.55; P=0.066) and satisfaction with DSCHS. However, the association between ethnicity (X^2 = 14.39; P=0.013), years of working experience (X^2 = 11.23; P=0.024) and satisfaction with DSCHS was found to be statistically significant

Table 5: Association between socio-demographic variable, knowledge of DSCHS and satisfaction with use of DSCHS

Variable	Satisfaction		χ^2	df	*p*-value
	Satisfied	Unsatisfied			
Gender					
Male	70 (50.4)	69 (49.6)	0.695	1	0.460
Female	57 (45.2)	69 (54.8)			
Age group					
22 – 32	18 (60.0)	12 (40.0)	2.199	3	0.532
33 – 42	29 (43.9)	37 (56.1)			
43 – 52	73 (47.4)	81 (52.6)			
> 52	7 (46.7)	8 (53.3)			
Education					
Primary	3 (75.0)	1 (25.0)	1.306	2	0.520
Secondary	12 (44.4)	15 (55.6)			
Tertiary	112 (47.9)	112 (47.9)			
Marital Status					

Single	20 (51.3)	19 (48.7)	1.322	2	0.516
Married	106 (47.1)	119 (52.9)			
Divorced/Widow	1 (100.0)	0 (0.0)			
Religion					
Christian	123 (47.5)	136 (52.5)	3.535	2	0.171
Muslim	1 (33.3)	2 (66.7)			
Others	3 (100.0)	0 (0.0)			
Ethnicity					
Urhobo	31 (41.9)	43 (58.1)	14.396	5	0.013
Igbo	64 (51.6)	60 (48.4)			
Isoko	6 (28.6)	15 (71.4)			
Ijaw	13 (86.7)	2 (13.3)			
Itsekiri	9 (42.9)	12 (57.1)			
Others	4 (40.0)	6 (60.0)			
Years of Working Experience					
0 – 5	19 (57.6)	14 (42.4)	11.233	4	0.024
6 – 10	17 (38.6)	27 (61.4)			
11 – 15	37 (54.4)	31 (45.6)			
16 – 20	31 (58.5)	22 (41.5)			
21 and above	23 (34.3)	44 (65.7)			
Knowledge of DSCHS					
Good knowledge	102 (51.3)	97 (48.7)	3.554	1	0.066
Poor knowledge	25 (37.9)	41 (62.1)			

Discussion

The socio-demographic characteristics of respondents revealed that a little above half of the study participants were male while a little less than half were female. This observation may indicate a fairly balanced gender distribution in Delta state civil/public service. Slightly above half of the respondents were in the age group of 43-52 years, and a good majority of the respondents were married and had tertiary level of education. It was also observed that more than one-quarter of respondents had been working for 11-15 years, while about one-fifth of the respondents had been working for 21 years and above. These observations are suggestive of a young, well-educated and experienced workforce in Delta state civil/public service. Furthermore, it was not unexpected to observe that a great majority of the study participants were Christians, considering the fact that Delta State is in southern Nigeria, where Christianity is the predominant religion.

This study revealed that about three-quarter of the respondents has good knowledge of DSCHS. This observation is higher than the findings of Yusuf et al., [14] and Mohammed et al., [15], who reported that about one-tenth of the respondents had good knowledge of a community-based health insurance scheme. The difference observed in this study might be due to differences in geographical location and socio-demographic characteristics of the respondents. This finding implies that most civil servants in Delta state

have good knowledge of DSCHS. Although, above three-quarter of respondents in this study know: what DSCHS entails, the number of dependents entitled to care under the principal enrolee of the scheme, at least one of the benefits and role of DSCHS, it is worthy to note that only half of the respondents know the meaning of health insurance. This observation may have implications for abuse of the scheme since a substantial number of the enrolees do not understand the meaning of health insurance and may constitute a problem.

It was observed that gender, age, education, marital status, religion and years of working experience, were significantly associated with knowledge of DSCHS. This observation is in conflict with the findings of Kongmany et al., [16] who reported that socio-demographic characteristics do not influence knowledge of National Health Insurance policy. However, it is in agreement with Aderibigbe et al., [17], and Suleiman et al., [18], who reported that age, education, gender and household size were significantly associated with knowledge of a community-based health insurance scheme. Suleiman et al., [18], also assert that the utilization of a community-based health insurance scheme in Katsina influences knowledge of the scheme, but the difference was not statistically significant. Similarly, Abiola et al., [19] reported that education and utilization were associated with knowledge of the National Health Insurance Scheme.

Regarding the satisfaction of study participants with DSCHS, it was observed that less than half of the respondents were satisfied with the attitude of the healthcare staff, while a little above one-fifth were unsatisfied, and about one-third were neutral with respect to the attitude of the healthcare staff. This observation is comparable to a previous study done in Kano state where about one-third of the respondents were satisfied with their healthcare provider's attitude [20]. It was also observed that slightly above one-quarter of the respondents were satisfied with the quality of healthcare staff, while less than one-sixth were not satisfied, and about one-quarter were neutral. This is not in keeping with the findings of a previous study, which reported that about two-thirds of the respondents were not satisfied with the services of healthcare staff in a health insurance scheme [21]. This observation may be due to the fact that the healthcare facilities providing services under the scheme were accredited prior to the commencement of the scheme, and staff audit and verification was part of the process of ensuring the quality of staff.

This study also revealed that more than one-quarter of the respondents were satisfied with the waiting time, while the majority of respondents were not satisfied with the waiting time, and a little below one-third were neutral. This observation is also not in agreement with previous studies, which revealed that more than half of the respondents were satisfied with the waiting time [22][21]. The observation that the majority of respondents were not satisfied with the waiting time is probably due to the markedly increased number of enrollees in the scheme since its inception, which could lead to increased waiting time. This finding also suggests the need for increased staffing of the health facilities under the scheme to help reduce the waiting time. However, the observation that the majority of respondents (46.4%) were not satisfied with the scope of services provided by the scheme is comparable to the findings of Ajeigbe et al., [23], where more than half of the study subjects were not satisfied with the services of their health insurance scheme. The observation that only about one-fifth of respondents were satisfied with the scope of services provided by the scheme is highly indicative of the urgent need to scale up services and review the benefit package of DSCHS to make it more comprehensive.

Although it was revealed that about two-fifths of respondents were satisfied with the administrative process of the scheme, more than one-fifth of respondents were not satisfied with the administrative process, and more than one-third of respondents were neutral regarding the administrative process. Similarly, it was observed that about one-fifth of the respondents were satisfied with the referral chain of the scheme, and about one-third of respondents were not satisfied, while the majority of respondents were neutral regarding the referral chain of the scheme. This observation shows that a significant number of

respondents were either unsatisfied or neutral regarding the administrative and referral processes of the scheme. Hence, there is a need to reduce the administrative bottlenecks and improve the referral system to improve client satisfaction with the scheme. This finding is corroborated by a previous study where less than one-tenth of study participants were satisfied with the health insurance scheme [24].

The observation that more than half of the respondents were satisfied with their service provider (health facility) is similar to the findings of Ogben and Illesanmi [22], who reported that more than half of the respondents were satisfied with hospital services even though a higher proportion of respondents were satisfied with their health facility (service provider), less than one-third of the respondents were satisfied with the overall quality of care received. More so, about one-third of respondents were not satisfied with the overall quality of care received in their health facilities. This is contrary to the report of a previous study where more than half of the respondents were satisfied with the overall services provided [22]. This observation could be attributed to the relatively young age of the scheme and also underpins the need to scale up services to increase client satisfaction.

Furthermore, this study revealed that more than two-fifths of the respondents were satisfied with the amount of money deducted monthly. In contrast, more than half of the respondents were not satisfied with the amount deducted monthly. The observation that the majority of respondents were not satisfied with the amount of money deducted monthly as premium may not be unconnected with the fact that the majority of the respondents were either unsatisfied or neutral regarding the scope of services, quality of care provided and the referral system of the scheme. Thus, most respondents may likely perceive the scheme as not providing enough value for money deducted monthly. Hence, their dissatisfaction with the amount deducted monthly as premium. Overall, it was found that less than half of the respondents were satisfied, while more than half of the respondents were unsatisfied with the DSCHS. This observation is contrary to a previous study, which reported that a large percentage of respondents were satisfied with NHIS [19]. It is also not in keeping with the findings of Okafor [24], where one-tenth of the respondents were found to be satisfied with their health insurance scheme. The differences observed in this study may be due to the nature and scope of the health insurance scheme, the duration of the scheme, the geographical location and the socioeconomic status of the respondents.

The findings of this study should, however, be interpreted with caution since it was a self-reported account and could be subject to information bias. The study also did not cover enrollees from the informal sector and thus cannot be generalized to all enrollees of DSCHC.

Conclusion

The majority of the study participants had good knowledge regarding DSCHS but were unsatisfied with the level of services provided by the scheme. Most of the respondents were particularly not satisfied with the scope of services provided by the scheme and the amount deducted monthly from their salary as premium. The significant factors associated with satisfaction with DSCHS were ethnicity and years of working experience. It is therefore recommended that Delta State Contributory Health Commission should review its benefit package and urgently scale-up services to improve enrollees' satisfaction with the scheme. The administrative bottlenecks associated with the scheme should be reduced, and the referral mechanism should be improved for enhanced quality of care and increased client satisfaction. Finally, the service providers (accredited health facilities) should engage more healthcare workers to meet the needs of the growing number of enrollees to reduce waiting time.

References

1. Asante A, Price J, Hayen A, Jan S, and Wiseman V. Equity in Health Care Financing in Low- and Middle-Income Countries: A Systematic Review of Evidence from Studies Using Benefit and Financing Incidence Analyses. *PLoS One,* 2016; **11**(4): e0152866.
2. Chisholm D, Docrat S, and Abdulmalik J. Mental Health Financing Challenges, Opportunities and Strategies in Low- and Middle-Income Countries: Findings from the Emerald Project. *BJPsych Open,* 2019; **5**(5): 68
3. Lagarde M and Palmer N. The Impact of Health Financing Strategies on Access in Low and Middle Income Countries: Protocol. *Cochrane Database of Systematic Reviews*; 2018; (4): CD006092.
4. Jimmy AI, Boateng KA, Twum P, Larbie D, Bangura A, Conteh MH, and Agyei-Baffour P. Population Characteristics and their Implications on the Benefit Basket of National Social Health Insurance Scheme in Sierra Leone: A Prospective View. *Adv Public Health*; 2021; 1-10
5. Carapinha JL, Ross-Degnan D, Desta AT and Wagner AK. Health Insurance Systems in Five Sub-Saharan African Countries: Medicine Benefits and Data for Decision Making. *Health Policy Amst Neth*; 2011; **99**(3): 193-202.
6. Okiche EL, Okiche CY, Isife CT, Obi-Ochiabutor CC, and Ogbuabor CA. Health Care Payment Practice, Perception and Awareness of National Health Insurance Scheme by Market Women in Enugu Metropolis South-East Nigeria. *PAMJ*; 2015; 40: 127.
7. Delta State Contributory Health Scheme, operational guidelines. 2015. [cited 02 February, 2023]. Available at: https://dschc.org.ng/DSCHS-Operational-Guidelines.pdf
8. Delta state contributory health commission (DSCHC) Law, 2015. [cited 02 February, 2023]. Available at: https://www.dschc.org.ng/DSCHC_LAW.pdf
9. Delta state contributory health commission (DSCHC). [cited 02 February, 2023] Available at: https://www.dschc.org.ng/index.html
10. Ononokpo E. Overview of National Health Insurance Scheme: A paper presented at the 3rd Junior Staff Workshop; Abuja. 2010.
11. Delta state government. [cited 02 February, 2023]. Available at: https://www.deltastate.gov.ng/
12. Delta state government MDAS. [cited 02 February, 2023]. Available at: https://www.deltastate.gov.ng/mdas/
13. Cochran WG. Sampling Techniques. *John Wiley & Sons*, Hoboken. 2007.
14. Yusuf HO, Kanma-Okafor OJ, Ladi-Akinyemi TW, Eze UT, Egwuonwu CC, and Osibogun AO. Health Insurance Knowledge, Attitude and the Uptake of Community-Based Health Insurance Scheme among Residents of a Suburb in Lagos, Nigeria. *West African journal of medicine*, 2019; **36**(2): 103–111.
15. Mohammed SI, Busayo AE, Dambam SM, Ndagi JS, and Shu'aibu LA. Factors Determining Enrollee's Choice of Private and Public Healthcare Providers of Community Based Health Insurance Scheme in Edu Lga Kwara State. *European Journal of Health Sciences*, 2022; **7**(6): 34–44.
16. Kongmany C, Bounfeng P, Bouaphat P, Vanpahnom S, Jo D, and Essink DR. Factors affecting knowledge of National Health Insurance Policy among out-patients in Lao PDR: an exit interview study. *Global Health Action*, 2020; 13(sup2).

17. Aderibigbe AS, Aganaba D, Osagbemi GK, and Aderibigbe A. Knowledge, Practice and Willingness to participate in Community Health Insurance Scheme among Households in Nigerian Capital City. *Sudan Journal of Medical Sciences,* 2017; **12**(1): 9 – 18.
18. Suleiman YS, Mukhtar M, Nasir L, and Yahaya RJ. Knowledge of Community Based Health Insurance among Residence of Katsina state, Nigeria: A comparative cross-sectional study. *Texila International Journal of Academic Research*. 2022; Available at: https://doi.org/10.21522/TIJAR.2014.SE.22.01.Art006.
19. Abiola AO, Ladi-Akinyemi TW, Oyeleye OA, Oyeleke GK, Olowoselu OI, Abdulkareem, AT. Knowledge and Utilization of National Health Insurance Scheme among adult patients attending a tertiary health facility in Lagos State, South-Western Nigeria. *Afr J Prm Health Care Fam Med*. 2019; **11**(1): a2018.
20. Abdulraheem SI. Experience and Satisfaction with State Based Health Insurance Scheme (SBHIS) among Enrolees' Attending Accredited Health Care Facilities in Kano State, North West Nigeria. *Texila International Journal of Public Health*, 2020; **8**(3): 191–203.
21. Haile M, Hassen SL, and Temesgen MM. Client Satisfaction on Community Based Health Insurance Scheme and Associated Factors at Boru Meda Hospital, Northeast Ethiopia: Institutional Based Cross-sectional Study. *BMC Health Service Research*; 2021; 21: 1287.
22. Ogben C and Ilesanmi OS. Community based health insurance scheme: Preferences of rural dwellers of the federal capital territory Abuja, Nigeria. *Journal of Public Health in Africa*, 2018; **9**(1): 54–59.
23. Ajeigbe AK, Ayinbuomwan E, Adesina OM, Adedeji TA and Makinde RA. National Health Insurance Scheme: An Assessment of Service Quality and Clients' Dissatisfaction. *Ethiop J Health Sci*; 2020; **30**(5): 795-802.
24. Okafor UG. Assessment of Knowledge Attitude Perception and Practice of Health Insurance Scheme among Community Pharmacies in Lagos State. *Texila International Journal of Public Health*, 2016; **4**(4): 308–317.