Patient-Centered Benchmarking for Quality of Primary Care and the Satisfaction Impact of Service Components: Comparison of the Fee-paying and NHIS Clinics in a Tertiary Hospital in Nigeria

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Abstract:
Background*: The transition of our health system to universal health coverage and improved population health via social health insurance requires establishing an evidence based quality management culture. Patient satisfaction with care is an important major stakeholder metric that should drive system design and service delivery. Comparative studies on patient satisfaction between NHIS and fee- paying clinics provide necessary evidence to facilitate development of a system that delivers care acceptable to the population, encouraging enrolment towards UHC.*
Aim*: to compare the pattern of patient satisfaction with services in the fee-paying and NHIS primary care clinics to determine the service components that drive patient satisfaction and the dynamics of patient expectation, experience and satisfaction under these different service settings in our locale.*
Methodology*: a cross sectional survey using a modified SWOPS questionnaire for 300 randomly selected attendees. Comparison was done using patient centeredbenchmarking in calculated service gaps based on Rated Importance of service components. P value was set at .05*
Results*: Patient satisfaction was significantly higher in all parameters in the fee-paying clinic (Overall satisfaction:3.57vs 3.30). Calculated service gaps were higher for structural and process service components than health provider components in both clinics. The major differentiating factor was the performance of the Family Physicians in the fee- paying clinic with positive trade off effect on the other service components unlike in the NHIS clinic.*
Conclusion*: the NHIS should adopt a Family Physician led Primary Medical System to ensure high quality care, patient satisfaction and efficiency.*
Key words:*Quality of Care, Patient Satisfaction, Health Insurance, Service Gaps, Comparison.*

I. Introduction

The health care system of Nigeria is undergoing a transition towards Universal Health Coverage (UHC) through increasing the population of citizens covered by social health insurance. The National Health Insurance Scheme (NHIS) has been in operation for about 15years but has achieved coverage of only about 10% of citizens.[1] The journey has been slow and hindered by the lack of well developed sociopolitical structures that should ensure its success and sustainability.[1,2,3] The achievement of the goals of universal health coverage via social health insurance requires that there should be well developed and implemented regulatory framework to monitor and ensure that quality of care, accountability, efficiency and transparency are entrenched in the system.[1,4,5]The quality of services rendered to clients is the central function of the system and should be a fundamental concern to all stake holders and society as this directly determines if the goals of UHC will be achieved.[6] The quality of health care services has not received much attention at any level in our health care system. A quality management culture is lacking. All quality components fall far below expected standards given our resources, both human and material.[1,7] This is evidenced by poor national health indices.[1]There are existing regulatory benchmarks for hospitals which are minimum standards for personnel, equipment and structures enforced for licensing and accreditation.[8]Service delivery standards have received much less attention. There is a Patient Bill of Rights stipulating that patients are entitled to service within 30 minutes of arrival, clean safe secure environment, explanation of their diagnosis and treatment, open labelling of their drugs etc, but enforcement of these basic minimum has not seen any well organized, sustained effort.[9] Where service providers are aware of these rights, application in service delivery is at their discretion without monitoring or strict regulation.[10] There are no effective complaints systems resulting in resignation or apathy of the users to whatever is offered or boycott of services resorting to private hospitals, alternative medicine or medical

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tourism.[11,12,13,14] Lack of a quality management framework has also resulted in wide variations in practice and service standards in hospitals of comparable status within the system.[15]

An important stakeholder input is the user perception of the services provided. This is one dimension of quality of health care as defined by the IOM and the standard for global best practices.[16] The client satisfaction with the quality of services determines continued utilization of the services and the outcome in terms of population health indices.[1] For this stakeholder, decision factor for service provider is inevitably based on perceived quality of care.

The quality of a service is determined by the performance of the various components of the service. Satisfaction with services is determined by the dynamic between patient expectations which incorporates their needs and priorities and their experience of the service. The quality of care literature has demonstrated that this dynamic is complex and influenced by factors related to the patient, their sociopolitical and economic environment.[17,18,19,20]

It is well known that the demands and priorities of the patients and health systems of developed countries are quite different from LMIC. [21,22] This difference however demonstrates the hierarchy of needs and expectations of users of health care and how these can vary with changing contexts and level of actualization on the hierarchy. Whereas developed countries have established advanced levels of accessibility, effective treatments and technologies, timeliness via appointment systems and ICT, culture of respect and courtesy for patients, quality management culture and active stringent regulatory frameworks, the LMIC countries are struggling with provision of basic infrastructure for health services, lack of trained personnel, and regulatory frameworks.[7,12] In the OECD countries, quality improvement is being driven by such patient priorities as choice of primary care physician(specialist), timeliness of response to emergency calls, design and color of beds and ambience in the wards and waiting areas etc.[21,22] For patients in LMIC, these represent luxuries not within their imagination. Priorities can only include such basics as having a qualified doctor, courtesy and respect from health providers, receiving their rights to explanations on diagnosis and treatment, getting basic investigations and results in a timely manner, availability and affordability of good quality drugs and clean water and washrooms.[14,23] The patient priorities therefore differ depending on their context and the level of actualization on the hierarchy of needs at any time. However, for managers in any setting, understanding these priorities facilitates cost effective planning of quality improvement strategies. The Kano Model has been used to explore the relative weights of service components in determining consumer expectations and satisfaction and has been applied to health care.[24]This model classifies service attributes in terms of the values and expectation attached to them by consumers and their capacity to drive satisfaction and attract patronage thereby giving managers the guide to user priorities and quality improvement. The interplay between expectations, experience and satisfaction with a service is explored in the consumer satisfaction theories which views satisfaction as an outcome of the disconfirmation of expectation in service experience.[25]This has been mathematically defined with the Gap Model which states that satisfaction is equal to expectation minus experience.[26] Simplifying the measurement of the complex construct of expectation with "rated importance" of service components has enabled the measurement of service gaps specific to patients and their provider facilities.[26,27,28] The expectations, needs, priorities and satisfaction of the enrollees and the interplay of these with their experiences given existing realities in the facilities needs to be explored to facilitate rapid development of cost-effective quality services capable of attracting and sustaining population enrollment and UHC.[1,29,30]

The pursuit of UHC creates the overriding impression that SHI leads to better quality healthcare and population health improvement thereby raising the expectations of enrollees.[31] However, without improvement in care structures and processes, the removal of cost barriers and increased coverage numbers cannot fulfill these expectations which leads to negative disconfirmation and reduction in utilization of the services.[32]

The NHIS must therefore work to provide services that offer better quality than the fee- paying services to encourage increased population enrollment.[7] There is need to compare services in both spheres of the health system. Such comparative studies both within and outside the NHIS provide information on what works and how and why it works given our unique sociopolitical and economic realities. This will provide evidence to facilitate system design especially at this infancy stage of the scheme.[33]

Several such studies have been done with mixed results showing higher satisfaction among the insured in some and among the uninsured in others.[33,34,35,36]The common causes of dissatisfaction were healthcare provider attitude, lack of needed drugs, long waiting time and poor state of facilities.[33,37,38,39,40]These factors were observed to vary depending on the existing realities in the clinics studied. In a study where the NHISclinic was recently opened and had not yet gained patient turn out comparable to the fee-paying clinic, the waiting time was favorable and services were prompt and friendly due to reduced patient /provider ratios.[36] In hospitals where the NHIS clinic was carved out of the fee-paying clinic and so was necessarily constrained, perception of the facilities was poorer than the fee-paying clinics.[35] Poor drug availability is a constant in the system reflecting fundamental problems in the management of NHIS and a major source of patient dissatisfaction.[35,37,38,41]This is also witnessed in other LMIC.[32,42] Poor attitude of providers cuts across the entire health system irrespective of insurance status and represents the endemic lack of a quality culture, monitoring, and regulation.[38,41]

The need to develop a quality management framework is urgent if the goals of the NHIS and UHC are to be achieved and also efficiency of resource utilization, stakeholder's participation and trust, and sustainability of the scheme.[6,32]. Setting optimum care standards and benchmarks given our resources and regulating same is vital to this success.[32] The current world standard on patient centered care makes health care users major stakeholders driving the development of quality standards for health care.[20,21,43]Patient centered benchmarking and service gaps measurement within facilities will provide the baseline evidence to facilitate uptake of quality measurement and improvement within the system.[27]

Comparing the user perception and satisfaction with services in the fee paying and insured clinics provides a wealth of information on how services should be organized and the dynamics of patient satisfaction given their needs, expectations, and priorities in our locale.[35,36]

Justification: the quality of health care services in our country is not getting the needed priority to ensure that the structures and processes in the system are aligned with the goals and are capable of delivering cost effective quality outcomes. There is need to develop a quality management culture and framework in the system. The consumer stakeholders' perception and satisfaction should constitute a major outcome and driver for the system and it's evaluation should be incorporated into system planning and design.[1,6, 14] There is need to understand the components of the services that drive patient satisfaction and the dynamics of these variables within different service settings providing for evidence-based decisions in development of our evolving health system and universal health coverage. A comparison of patient satisfaction with services at a fee-paying primary care clinic and NHIS primary care clinic in the same locale will provide such evidence. This was done with this study.

Aim and Objectives: to compare the pattern of patient satisfaction with services in the fee-paying and NHIS primary care clinics of the hospital to determine the service components that drive patient satisfaction and the dynamics of patient expectation, experience and satisfaction under these different service settings in our locale.

II. Materials and Methods

Study Area: The University of Benin Teaching Hospital is an 850 bedded tertiary health facility in Benin City. The General Practice Clinic is located at one extreme of the hospital offering primary care services to patients every day and serves as the gateway to the secondary and tertiary care units of the hospital. It houses the Family Medicine Clinic which caters to the fee- paying clients and the primary care unit of the NHIS clinic catering for the insured clients.

The Family Medicine Clinic: The clinic is run by the Family Medicine Department of the hospital with residency training in situ and receives patients on a walk- in basis every day. About 150- 250 patients attend the clinic per day on week days and about 40-80 patients on weekends. It opens at 8am and closes at 6pm. It has medical, nursing, records, revenue, laboratory and pharmacy units. Radio-diagnostic services are located in the main hospital within some walking distance. There is usually a minimum of ten doctors (Consultants and Residents) available to attend to the patients. Patients are required to pay for consultation and obtain their card from the revenue and records units respectively. Both units are adjacent to each other in the waiting hall. A patient flow management mechanism operates such that patients take numbers on arrival and queue discipline is maintained as they go through nursing services and access the doctors for consultation. There is an information /help desk in the waiting hall giving patients all information required to facilitate their access to care in the clinic and the main hospital. There is a television set in the hall offering programs on local channels. The clients are given a health talk every morning by the nurses. Emergency cases are stabilized and then taken by ambulance to the emergency department in the hospital if needed.

The NHIS Clinic: It offers outpatient services to enrolees everyday including weekends. It opens for services from 8am to 6pm on weekdays and from 9am to 5pm on weekends. It receives about 150 patients on week days and 80 -100 on weekends. Cases requiring secondary and tertiary care are referred to the appropriate units in the hospital. After- hours services are rendered to the patients at the Accident and Emergency department of the hospital. The clinic is run by medical officers and has its own records, nursing, administrative and pharmacy units. It shares revenue, laboratory units and canteen with the Family Medicine Clinic serving the fee- paying clients. A 10% charge is required of the patients on the cost of drugs.

Sample Population:

GPC: This was made up of all clients that attended the clinic in the study period about 5,320 clients in a month in the fee-paying clinic. Most of the patients are students, artisans, traders, civil servants, retirees and business owners reflective of the communities the hospital serves.

NHIS Clinic: all enrollees accessing services at the clinic in the study period estimated at 4000 enrollees per month. Most of the enrollees are the staff of the hospital and students in her training schools, the University of Benin and other federal government parastatals in the city.

Selection Criteria: All selected patients or patient relatives above 10 years of age who consented to participate were recruited into the study. All patients who were too ill to participate were excluded.

Sample Size: A total of three hundred subjects were recruited for each arm of the study.

Research Instruments:1) The Satisfaction with Out-Patient Services Questionnaire (SWOPS)was used with modification to include assessment of Pharmacist care.[44] The SWOPS is a standardized self -administered instrument developed by Seibert et al 1996 for measuring patient satisfaction with services in outpatient departments. It has six sections covering, Registration process, Nursing Care, Physician care, Information, Testing services and Overall satisfaction. The various dimensions have Cronbach alpha scores ranging from 0.84 -0.95. The parameters were rated on a 5- point Likert scale.

2) A customized semi structured questionnaire to capture sociodemographic data, determinants of decision to use the clinic and rated importance of components of services (rated on a 5-point Likert scale same as the SWOPS rating). The instrument was interviewer administered for illiterate participants.

Sampling Method: Random sampling method by simple balloting was used.

Study Duration: The calculated sample size of 300 in each clinic was recruited over a period of October 2017 to February 2018.

Study Procedure: About 5 patients were recruited each day in each clinic. The selected participants had the study explained to them. Informed consent was obtained, and they filled the questionnaire at their own pace as they went through the clinic for their care. The questionnaires were retrieved at the pharmacy which is the last service point in the clinic. Participants who were illiterate were assisted by a trained research assistant.

Ethical Consideration:

Ethical Approval was obtained from the hospital Research and Ethics Committee. PROTOCOL NUMBER: ADM/E 22/A/VOL.VII/1480. Informed consent was obtained from all the participants. Confidentiality was maintained in data collection, collation, analysis and reporting.

Data Analysis:

The data was collated using Microsoft Excel and analyzed with SPSS version 21. P value was set at 0.05. The distribution of satisfaction with the various components of services was done using frequencies and percentages. The 5-points Likert scale was scored 1-5 from poor to excellent. The mean of the scores for all the participants on each parameter was calculated as the satisfaction score for the parameter. Spearman correlation was used to determine the relationship between perception of service components and satisfaction. The mean score of the rated importance of service components was used as benchmark score to compare the mean satisfaction scores of related service components to calculate the Service Gaps. The one sample t test was used to test the significance of Service Gaps.

III. Results

Distribution of Sociodemographic Variables among the Respondents.

The distribution of socio demographic characteristics was similar in both groups. Sex distribution was almost equal. Majority of the respondents in both cohorts had tertiary education but proportion was higher in the NHIS cohort.

Table 1: Distribution of Sociodemographic Variables among the Respondents.

COHORT	GPC		NHIS	
Variable	**Frequency**	**Percentage**	**Frequency**	**Percentage**
Age				
10-19	**74**	24.7	**73**	24.3
20-29	58	19.3	42	14.0
30- 39	48	16.0	47	15.7
40-49	44	14.7	50	16.7
50—59	7	2.3	18	6.0
60—69	54	18.0	36	12.0
70>	15	5.0	34	11.3
Sex				
Male	**144**	**48.0**	**159**	**53.0**
Female	156	52.0	141	47.0
Educational Status				
None	**8**	**2.7**	**2**	**0.7**
Primary	82	27.3	64	21.3
Secondary	39	13.0	13	4.3
Tertiary	171	57.0	221	73.7

Religion Christianity	283	94.3	285	95.0
Islam	17	5.7	15	5.0

Distribution of Mean Scores of Rated Satisfaction with Service Components.
The scores for overall satisfaction and satisfaction with specific service components were generally higher for the uninsured cohort. The differences were statistically significant at $p<0.001$. There was a similar trend in both cohorts with process and structural service components having lower ratings than health provider components. The proportion of respondents who scored the structural and service components as good (score $=>3$) were higher in the GPC than NHIS cohort.

Table 2: Distribution of Mean Scores and t test of Rated Satisfaction with Service Components.

S/No	Service Component	GPC COHORT		NHIS COHORT		2 sample t test/ P value.
		Mean Satisfaction Score	% of Respondents rating satisfaction => 3/5 (Good)	Mean Satisfaction Score	% of Respondents rating satisfaction => 3/5 (Good)	
1	Registration Process	3.44	93.0	3.03	72.0	5.325/.000
2	Attitude of Registration	3.52	94	3.06	76.3	6.467/.000
3	clerk	3.47	94	3.06	77.4	6.030/.000
4	Privacy of registration	3.41	91.4	3.05	80.4	5.249/.000
5	Quality of waiting area	3.39	91.7	3.09	83.3	4.519/.000
6	Canteen facility	3.35	89	3.03	79.7	4.540/.000
7	Perception of Waiting time	3.51	95.7	3.30	94.7	3.367/.001
8	Nurse professional	3.62	98	3.28	95.0	5.700/.000
9	Doctor professional	3.42	92.5	3.29	91.4	1.936/.054
10	Ease of getting Lab tests	3.49	93.4	3.14	93.4	5.103/.000
11	Sign posting to the Lab	3.53	96.6	3.18	92.0	5.340/.000
12	Cleanliness of Lab Area	3.61	97.4	3.46	97.3	2.355/.019
13	Information	3.59	96	3.25	89.9	4.990/.000
14	Pharmacists professional Overall Satisfaction with	3.59	97.7	3.41	95.7	3.134/.002
15	treatment Overall Satisfaction with	3.57	96.4	3.30	92.7	4.517/.000
16	Clinic services	**3.4884 +/- 0.0822**		**3.17 +/-0.1298**		
17	**Mean rating for all service components** Mean +/- 1 SD	3.41-3.57		3.04-3.30		

Correlation between Sociodemographic Characteristics and Satisfaction with Process Quality Components (Table 3).
There was significant weak negative correlation between educational status and ease of getting lab results in the GPC cohort while in the NHIS cohort a significant positive correlation was found between educational status and satisfaction with information delivery. All the othersociodemographic variables had no significant correlation with any of the process service components.

Table 3: Correlation between Sociodemographic Characteristics and Satisfaction with Process Quality Components.

Socio-demog Variable	Cohort	Registration Process	Privacy of Registration	Perception Waiting time	Ease get Lab result	Signposting to lab	Information
SEX	GPC	.058 .319	.046 .425	.020 .732	.127 .051	.119 .072	.077 .183
	NHIS	-.048 .404	.004 .947	-.070 .225	-.073 .266	.006 .933	-.068 .239
AGE	GPC	-. 059 .308	-.088 .127	-.041 .474	.006 .926	-.035 .596	-.086 .138
	NHIS	.063 .278	.014 .815	.076 .189	.098 .135	-.079 .232	.032 .587
Educ status	GPC	-.090 .120	-.077 .183	-105 .068	-.139* .033	-.121 .069	.016 .780
	NHIS	.021 .713	-.012 .840	.003 .954	.114 .082	-.005 .942	.235** .000

*sig <.05

Correlation Between Sociodemographic Characteristics and Satisfaction with Structural Quality Components (Table 4).

There was a significant weak correlation between female gender and perception of cleanliness of the lab area among the GPC cohort. No significant correlation was found between all the other service components and the other sociodemographic variable in both cohorts.

Table 4:Correlation Between Sociodemographic Characteristics and Satisfaction with Structural Quality Components.

Sociodemo. Variable	Cohort	Quality waiting area	Canteen Facility	Cleanliness lab area
Sex	GPC	.086 .136	.016 .781	.132* .045
	NHIS	.024 .681	-.031 .594	-.003 .969
Age	GPC	-. 059 .309	-.074 .199	-.045 .495
	NHIS	.040 .486	.034 .555	.058 .383
Educational Status	GPC	-.042 .466	-.076 .192	-105 .111
	NHIS	.014 .808	.037 .518	.047 .477

*sig <.05

Correlation Between Sociodemographic Characteristics and Satisfaction with Staff Interpersonal and Professional Ratings; Nurse and Registration Clerk (Table 5).

There was a significant weak positive correlation between educational status and perception of Nurse professional and interpersonal skills only in the NHIS cohort. Age and gender had no correlation with nurse parameters in both cohorts. None of the socio demographic variables had significant correlation with attitude of the registration clerk in both cohorts.

Table 5:Correlation Between Sociodemographic Characteristics and Satisfaction with Staff Interpersonal and Professional Ratings; Nurse and Registration Clerk.

Sociodemo. Variable	Cohort	Nurse Helpful	Nurse Polite	Nurse Caring	Nurse Professional	Registration Clerk attitude
Sex	GPC	.019 .741	.018 .756	.005 .934	.056 .336	.022 .705
	NHIS	.076 .190	.001 .988	.042 .467	.055 .346	.013 .826
Age	GPC	-. 090 .121	-.031 .597	-.063 .279	-.057 .329	-.073 .210
	NHIS	-. 002 .978	.054 .347	.047 .415	-.008 .891	-.006 .912
Educational Status	GPC	-.036 .529	-.054 .348	-073 .210	-.066 .251	.003 .958
	NHIS	.127* .027	.124* .032	.137* .017	.162** .005	-.008 .890

*sig <.05

Correlation Between Sociodemographic Characteristics and Satisfaction with Interpersonal and Professional Ratings: Doctors and Pharmacists (Table 6).

Female gender had significant weak positive correlation with professional and all interpersonal skills of the doctors and pharmacist except for helpful attitude of pharmacists in the GPC cohort but not in the NHIS cohort. Age correlated positively with caring attitude for doctors only among the GPC cohort and none in the NHIS cohort. Educational status had weak positive correlation with these parameters only in the NHIS cohort and none in the GPC cohort.

Table 6: Correlation Between Sociodemographic Characteristics and Satisfaction with Interpersonal and Professional Ratings: Doctors and Pharmacists.

Socio-Demo. Variable	Cohort	Doctor Helpful	Doctor Polite	Doctor Caring	Doctor Profess.	Pharma Helpful	Pharm. Polite	Pharm Caring	Pharm Profess.
Sex	GPC	.123* .033	.128* .027	.147* .011	.189** .001	.125 .059	.166* .012	.148* .026	.149* .026
	NHIS	-.053 .363	-.062 .285	.056 .337	-.054 .354	-.015 .804	.013 .831	-.002 .977	.006 .926
Age	GPC	-.100 .083	-.094 .105	-.134* .020	-.101 .082	-.026 .699	-.083 .209	-.069 .303	-.053 .434
	NHIS	.027 .643	.008 .888	-.024 .684	.005 .928	-.039 .510	.029 .622	-.038 .517	-.005 .938
Educat Status	GPC	-.008 .893	-.021 .718	-028 .627	-.057 .324	-.042 .525	-.022 .734	-050 .627	-.027 .686
	NHIS	-.133* .021	.123* .034	.111 .054	.094 .106	.194** .001	.150* .011	-095 .108	.137* .020

*sig <.05, **sig < .005

Correlation Between Sociodemographic Characteristics and Overall Satisfaction Scores (Table 7).
Only educational status had weak positive correlation with overall satisfaction with clinic services and treatment in the NHIS cohort but not in the GPC cohort. Age and gender had no significant correlation with these parameters in both cohorts.

Table 7: Correlation Between Sociodemographic Characteristics and Overall Satisfaction Scores.

Sociodem. Variable	Cohort	Overall Satisfaction with Treatment	Overall Satisfaction Clinic Services
Sex	GPC	.110 .056	-.079 .171
	NHIS	-.070 .227	-.098 .090
Age	GPC	-.076 .188	-.106 .067
	NHIS	-.025 .669	.114* .049
Educational Status	GPC	-.043 .456	-.063 .277
	NHIS	.265** .000	.183** .001

*sig <.05

Mean Score, t test and Correlation of Rating of Attitude of Registration Staff with Registration Process and Satisfaction with Clinic Services (Table 8).
The rating of attitude of registration clerk was significantly higher in the GPC cohort. Correlation with satisfaction with registration process was positive and strong for both cohorts but correlation with satisfaction with clinic services was strong in GPC but lower and moderate in NHIS.

Table 8: Mean Score, t test and Correlation of Rating of Attitude of Registration Staff with Registration Process and Satisfaction with Clinic Services.

Service Component	Cohort	Mean Score	Registration Process.	Satisfaction with Clinic Services.
Attitude of Clerk	GPC	3.52	.745 ** .000	.623 ** .000
	NHIS	3.06	.789 ** .000	.378 ** .000
Compare of Mean	T test p value	5.325 .000		

Mean Scores of Nurse Parameters, t test and Correlation with Satisfaction Ratings (Table 9).

The scores for nurse professional and interpersonal skills were significantly higher in the GPC than the NHIS cohort but correlation with professionalism was similar in both cohorts. Correlation with overall satisfaction parameters was stronger in GPC than NHIS.

Table 9: Mean Scores of Nurse Parameters, t test and Correlation with Satisfaction Ratings.

Variable	Cohort	Nurse Helpful	Nurse Polite	Nurse Caring	Nurse Professional	Overall sats. Treatment	Overall sats. Clinic Services
Mean Score	**GPC**	3.51	3.48	3.49	3.51	3.59	3.57
	NHIS	3.30	3.26	3.28	3.30	3.41	3.30
Compare of Mean	**T test pvalue**	3.313 .001	3.593 .000	3.575 .000	3.367 .001	3.134 .002	4.517 .000
Nurse Professional	**GPC**	.673** .000	.788** .000	.729** .000	1.000	.566 ** .000	.549 ** .000
	NHIS	.656** .000	.709** .000	.781** .000	1.000	.377 ** .000	.362 ** .000

**p<.005

Mean Scores of Rating of Clinical Care Components by Doctors, t test and Correlation with Satisfaction Ratings (Table 10).

The scores for clinical care parameters and overall satisfaction with medical care were higher in GPC than NHIS. The t- test for the difference was significant for all except explanation of care, answers after visit, and outcome of consultation. Correlation between these parameters and doctor professional rating, overall satisfaction with treatment and clinic services were higher in GPC than in NHIS cohort.

Table 10: Mean Scores of Rating of Clinical Care Components by Doctors, t test and Correlation with Satisfaction Ratings.

Variable	Cohort	Time with Dr	Thorough care	Instruction on meds.	Health promo Talk	Explain care	Answers after Visit	Outcome consult	Prof. rating	Overall Satsmed.care
Mean Score	**GPC**	3.67	3.70	3.64	3.61	3.58	3.51	3.56	3.62	3.54
	NHIS	3.52	3.50	3.47	3.47	3.49	3.47	3.49	3.28	3.22
Compar Mean	**T test P value**	2.232 .026	3.108 .002	2.773 .006	2.092 .037	1.584 .114	.719 .472	1.084 .279	5.700 .000	5.617 .000
Outcom Consult	**GPC**	.615** .000	.652** .000	.658** .000	.725** .000	.702** .000	.792** .000	1.000	.522** .000	.521** .000
	NHIS	.677** .000	.793** .000	.826** .000	.814 ** .000	.872** .000	.905** .000	1.000	.440 ** .000	.391** .000
Overall sats. Med care	**GPC**	.605** .000	.601** .000	.603** .000	.621** .000	.513** .000	.580** .000	.521** .000	.728** .000	1.000
	NHIS	.380 ** .000	.401** .000	.442 ** .000	.407 ** .000	.382 ** .000	.398 ** .000	391** .000	.797 ** .000	1.000
Profess. Rating	**GPC**	.671** .000	.613** .000	.665** .000	.600** .000	.585** .000	.546** .000	.522** .000	1.000	.728** .000
	NHIS	.382 ** .000	.457 ** .000	.524** .000	.424 ** .000	.479 ** .000	.472** .000	.440 ** .000	1.000	.797** .000
Satisfaction treatment	**GPC**	.569** .000	.575** .000	.585** .000	.613** .000	.545** .000	.575** .000	.587** .000	.600** .000	.574** .000
	NHIS	.410** .000	.435** .000	.413** .000	.409** .000	.409** .000	.437** .000	.414** .000	.276** .000	.235** .000
Sats. clinic services	**GPC**	.603**. 000	.598** .000	.643** .000	.556**. 000	.621** .000	.590** .000	.581** .000	.515**. 000	.604** .000
	NHIS	.341** .000	.425** .000	.418** .000	.319** .000	.401** .000	.428** .000	.410** .000	.312** .000	.296** .000

**p<.005.

Mean Scores of Interpersonal Skills of Doctors, t test and Correlation with Rating of Professionalism and Satisfaction (Table 11).

The rating for doctors' interpersonal skills were significantly higher in GPC than NHIS. Correlation with overall satisfaction with medical care and professionalism were similar in both cohorts but correlation with outcome of consultation and overall satisfaction parameters were higher in GPC than NHIS cohort.

Table 11: Mean Scores of Interpersonal Skills of Doctors, t test and Correlation with Rating of Professionalism and Satisfaction.

Variable	Cohort	Dr Helpful	Dr Polite	Dr Caring

Mean Score	GPC	3.65	3.61	3.64
	NHIS	3.29	3.30	3.29
Comparison of Means	T test p value	6.203 .000	5.168 .000	5.844 .000
Outcome of Consultation	GPC	.518 ** .000	.527** .000	.529** .000
	NHIS	.421 ** .000	.429 ** .000	.462** .000
Overall Sats. Med Care	GPC	.780 ** .000	.805 ** .000	.700** .000
	NHIS	.790 ** .000	.770 ** .000	.773** .000
Professional Rating	GPC	.816** .000	.827 ** .000	.899 ** .000
	NHIS	.843** .000	.907 ** .000	.953 ** .000
Satisfaction Treatment	GPC	.585 ** .000	.558** .000	.587** .000
	NHIS	.320 ** .000	.305 ** .000	.303 ** .000
Satisfaction Clinic Services	GPC	.553** .000	.539** .000	.536** .000
	NHIS	.320 ** .000	.305 ** .000	.303 ** .000

**p<.001.

Mean Scores, t-test and Correlation Between Pharmacist Parameters and Satisfaction Ratings (Table 12).
The rating for pharmacist's interpersonal skills was significantly higher in GPC than NHIS. Correlation with overall satisfaction with pharmacy care and professionalism was similar in both cohorts but correlation with overall satisfaction parameters were higher in GPC than NHIS cohorts.

Table 12: Mean Scores, t-test and Correlation Between Pharmacist Parameters and Satisfaction Ratings.

Variable	Cohort	Pharma Helpful	Pharma. Polite	Pharma. Caring	Pharma. Infor.	Pharmacist Professional	Overall Pharma Care
Mean Score	GPC	3.59	3.59	3.56	3.59	3.59	3.55
	NHIS	3.34	3.26	3.18	3.28	3.25	3.29
Compare of Means	t-test p-value	3.320 .001	4.743 .000	5.357 .000	4.971 .000	4.990 .000	4.042 .000
Professional	GPC	.729** .000	.712** .000	.855** .000	.804** .000	1.000	.859** .000
	NHIS	.650** .000	.726** .000	.864** .000	.854** .000	1.000	.859** .000
Overall Ph Care	GPC	.783** .000	.809** .000	.858** .000	.862** .000	.859** .000	1.000
	NHIS	.598** .000	.661** .000	.768** .000	.865** .000	.859** .000	1.000
Sats. treatment	GPC	.644** .000	.652** .000	.683** .000	.667** .000	.703 ** .000	.673 ** .000
	NHIS	.384** .000	.367** .000	.307** .000	.395 ** .000	.329** .000	.433** .000
Sats. Clinic Services	GPC	.637** .000	.661** .000	.678** .000	.715** .000	.677 ** .000	.745 ** .000
	NHIS	.364** .000	.422** .000	.432 ** .000	.468 ** .000	.421** .000	.502** .000

**p<.005

Mean scores, t test and Correlation Between the Rating of Provider Professionalism and Satisfaction with Treatment and Clinic Services (Table 13).
The ratings for professionalism was significantly higher in GPC than NHIS cohort. In GPC, the professional rating for doctors was highest followed by Pharmacist while in NHIS the Nurses were rated highest above the doctors and pharmacist. Correlation with overall satisfaction parameters was stronger in GPC and highest for pharmacist while in the NHIS it was highest for treatment with nurse professionalism and for satisfaction with services it was highest for pharmacists.

Table 13: Mean scores, t test and Correlation Between the Rating of Provider Professionalism and Satisfaction with Treatment and Clinic Services.

Variable	Cohort	Nurse Professional	Doctor Professional	Pharmacist

				Professional
Mean Score	**GPC**	3.51	3.62	3.59
	NHIS	3.30	3.28	3.25
Compare of Means	**T test** **p value**	3.367 .000	5.700 .000	5.990 .000
Satisfaction Treatment	**GPC**	.566 ** .000	.600** .000	.703** .000
	NHIS	.377 ** .000	.276 ** .000	.329** .000
Satisfaction Clinic services	**GPC**	.549 ** .000	.515** .000	.677 ** .000
	NHIS	.362 ** .000	.312 ** .000	.421 ** .000

**p<.005

Mean Scores and t test of Administrative Process Parameters, Information Parameters and Correlation with Satisfaction with Clinic Services (Table 14).

The rating of administrative process parameters and information were significantly higher for GPC than NHIS except for ease of getting lab tests. The correlation with satisfaction with clinic services was strong in GPC but moderate in NHIS. The trend was similar with information having the highest scores and strongest correlations in both cohorts.

Table 14: Mean Scores and t test of Administrative Process Parameters, Information Parameters and Correlation with Satisfaction with Clinic Services.

Variable	Cohort	Waiting Time	Registration Process	Ease of Lab tests	Information provision	Signposting to Lab
Mean Score	**GPC**	3.35	3.44	3.42	3.61	3.49
	NHIS	3.03	3.03	3.29	3.46	3.14
Compare of Means	**t -test p-value**	4.540 .000	5.325 .000	1.936 .054	2.355 .019	5.103 .000
Sats. clinic Services	**GPC**	.613** .000	.572** .000	.597** .000	.727** .000	.722** .000
	NHIS	.331 ** .000	.311 ** .000	.366 ** .000	.396 ** .000	.396 ** .000

**p<.005

Mean Scores of Environmental Parameters t-test and Correlation with Rating of Satisfaction with Clinic Services (Table 15).

The rating of the structural service components was significantly higher in GPC than NHIS with cleanliness of the lab rating highest in both cohorts. Correlation with satisfaction with services was strong in GPC but weak in NHIS with lab cleanliness having the highest correlation in both cohorts.

Table 15: Mean Scores of Environmental Parameters t-test and Correlation with Rating of Satisfaction with Clinic Services.

Variable	Cohort	Privacy of Registration	Quality of Waiting Area	Canteen Facility	Cleanliness Lab Area
Mean Score	**GPC**	3.47	3.41	3.39	3.53
	NHIS	3.06	3.05	3.09	3.18
Compare of Means	**t test** **p value**	6.030 .000	5.249 .000	4.519 .000	5.340 .000
Sats. Clinic Services	**GPC**	.561** .000	.618** .000	.557** .000	.678** .000
	NHIS	.304 ** .000	.338 ** .000	.302 ** .000	.385 ** .000

**p<.005

Pattern of Mean Scores of Rated Importance of Service Components (Table 16).

The rated importance of service components had higher values in the GPC than NHIS cohort. The ranking order showed a similarity in the cost of services being lowest after patient provider relationship for both cohorts. While environment was highest for GPC, facilities and drug availability ranked highest for the NHIS cohort.

Table 16: Pattern of Mean Scores of Rated Importance of Service Components.

Cohort	GPC	NHIS

Service Components	Num. Of Resp.	Mean Rated Importance	Std. Dev.	Rank	Mean Rated Importance	Std. Dev.	Rank
Staff competence	300	3.91	.946	2	3.69	1.029	4
Ease of admin process	300	3.85	.923	4	3.70	1.017	2
Hospital environment	300	3.97	.943	1	3.70	1.030	2
Facilities/drugs available	300	3.90	.969	3	3.71	1.020	1
Pt Provider Relationship	300	3.84	.996	5	3.63	1.005	5
Affordable Cost	300	3.80	1.062	6	3.62	1.029	6

Determination of Service Gaps:
Staff Competence: t test of Significance of the Difference Between Rated Importance and Rated Satisfaction of Staff Professionalism (Table 17).
The service gap for the health provider professionalism was higher for nurses in GPC than NHIS but higher for doctors and pharmacist in the NHIS than GPC.

SERVICE COMP.	Cohort	Observ. Mean	SD	Sample size	Null hypo-thesis	Diff. in mean	t-statistic	Df	P-value	95%CI for mean
Nurse Profess.	GPC	3.51	0.828	300	3.91	-.403	-8.437	299	.000	-.50—-.31
	NHIS	3.30	0.667	300	3.69	-.390	-10.128	299	.000	-.47—-.31
Doctor Profess.	GPC	3.62	.831	300	3.91	-.290	-6.042	299	.000	-.38—-.20
	NHIS	3.28	.613	300	3.69	-.410	-11.578	299	.000	-.48—-.34
Pharma. Profess.	GPC	3.59	0.827	225	3.91	-.318	-5.743	222	.000	-.43—-.21
	NHIS	3.25	0.714	287	3.69	-.439	-10.414	286	.000	-.52—-.36

Table 18: Administrative Process Parameters: t test of Significance of the Difference Between Rated Importance and Rated Satisfaction for Related Service Components.
The service gaps for administrative processes were higher in NHIS for registration process and waiting time but less than GPC for ease of getting lab results.

Table 18: Administrative Process Parameters: t test of Significance of the Difference Between Rated Importance and Rated Satisfaction for Related Service Components.

SERVICE COMP.	Cohort	Observ Mean	SD	Sample size	Null hypo-Thesis	Diff. in mean	t-statistic	Df	P-value	95%CI for mean
Regist. process	GPC	3.44	0.822	300	3.85	-.407	-8.569	299	.000	-.53—-.32
	NHIS	3.03	1.050	300	3.70	-.667	-10.997	299	.000	-.79—-.55
Ease of Lab tests	GPC	3.42	0.796	238	3.85	-.426	-8.250	299	.000	-.53—-.32
	NHIS	3.29	0.736	233	3.70	-.412	-8.552	232	.000	-.51—-.32
Waiting time	GPC	3.35	0.877	300	3.85	-503	-9.941	299	.000	-.60—-.40
	NHIS	3.03	0.857	300	3.70	-673	-13.603	299	.000	-.77—-.58

Hospital Environment Parameters: t- test of Significance of the Difference Between Rated Importance and Rated Satisfaction with Related Service Components (Table 19).
The service gaps for all the environmental components were higher for the NHIS than GPC cohorts.

Table 19: Hospital Environment Parameters: t- test of Significance of the Difference Between Rated Importance and Rated Satisfaction with Related Service Components.

Service Component	Cohorts	Observ Mean	SD	Sample size	Null hypo-thesis	Diff. in mean	t-statistic	df	P-value	95%CI for mean
Privacy reg. process	GPC	3.47	0.786	300	3.97	-.503	-11.093	299	.000	-.59—-.41

	NHIS	3.06	0.877	300	3.70	-.643	-12.704	299	.000	-.74—-.54
Quality wait area	GPC	3.41	.819	300	3.97	-.557	-11.767	299	.000	-.65—-.46
	NHIS	3.05	.860	300	3.70	-.647	-13.024	299	.000	-.74—-.55
Canteen	GPC	3.39	0.865	225	3.97	-.577	-11.550	299	.000	-.67—-.48
	NHIS	3.09	0.788	300	3.70	-.613	-13.478	299	.000	-.70—-.52
Clean. of Lab	GPC	3.53	.755	232	3.97	-.444	-8.954	231	.000	-.54—-.35
	NHIS	3.18	.647	228	3.70	-.522	-12.245	227	.000	-.61—-.44

Patient –Provider Relationship: t test of significance of the Difference Between Rated Importance and Rated Satisfaction with Related Service Components (Table 20).
The service gaps for the interpersonal skills of the staff were all higher in the NHIS except for nurses.

Table 20: Patient –Provider Relationship: t test of significance of the Difference Between Rated Importance and Rated Satisfaction with Related Service Components.

Service Component	Cohort	Observed Mean	SD	Sample size	Null hypo-Thesis	Diff. in mean	t-stat	df	P-value	95%CI for mean
Reg. Clerk ISR	GPC	3.52	.816	300	3.84	-.320	6.792	299	.000	.42—-.61
	NHIS	3.06	.816	300	3.63	-.570	12.099	299	.000	.66—-.48
Nurse ISR	GPC	3.44	0.777	300	3.84	-.040	-8.917	299	.000	.35—-.52
	NHIS	3.28	0.734	300	3.63	-.350	-8.259	299	.000	.43—-.27
Doctors ISR	GPC	3.63	.799	300	3.84	-.210	-4.552	299	.000	-.53—-.72
	NHIS	3.29	.628	300	3.63	-.340	-9.377	299	.000	-.41—-.27
Pharma ISR	GPC	3.58	.822	225	3.84	-.260	-4.745	224	.000	.47—-.68
	NHIS	3.26	.787	286	3.63	-.370	-7.9508	285	.000	.46—-.28

IV. Discussion

The distribution of the sociodemographic variables was mostly similar in both groups. Majority were adults, Christians and sex distribution was almost equal. Majority of respondents had tertiary education but this proportion was higher in the NHIS group.

The rating for overall satisfaction parameters and the service components were significantly higher globally for the GPC than NHIS cohort confirming better perceived performance in the fee paying clinic similar to findings by Daramola and in Ghana.[32,35] Overall satisfaction with treatment was higher than overall satisfaction with services in both cohorts but the scores were much lower in NHIS than GPC. In GPC, this difference was minimal at 0.02 but for the NHIS it was much higher at 0.11. This suggests that in GPC, experience of needs met (treatment) was closely matched by service experience but in NHIS, rating of needs met was quite different from service experience.

Sociodemographic variables were not significantly correlated with satisfaction with structural and process service components for both groups. However, for the health care professional parameters, educational status was significantly correlated with interpersonal and professional rating for doctors, nurses and pharmacist in the NHIS cohort, while gender alone was significant for only doctors' and pharmacists' interpersonal skills and professional ratings for the GPC cohort. Educational status also determined rating of overall satisfaction with treatment and clinic services for the NHIS unlike the GPC cohort where sociodemographic variables did not have significant impact. The trend in the GPC was attributed to the tendency of females to be more sensitive to interpersonal aspects of social interactions. The impact of educational status in the NHIS group was attributed to the possibility that educated persons were more able to demand and receive better care. This is contrary to most studies where educational and economic status are negatively correlated with satisfaction and attributed to more critical appraisal conferred by these statuses.[43] Also other studies have confirmed this finding in the NHIS and attributed it to educated persons having better understanding of the NHIS deliverables and so were better able to calibrate their expectation and therefore express more satisfaction.[37,38,40]

The registration clerk in the GPC performed significantly higher on interpersonal skills (IS) than that for NHIS cohort. In both cohorts, the correlation with satisfaction with registration process was comparably high. This mismatch of low scores and high correlation with satisfaction demonstrated the value attached to the performance of the registration clerk showing that the respondents were expressing a "service gap" for this service component.[27] In both cohorts, the correlation with overall satisfaction with services was much higher than for the professionals (value in GPC stronger than NHIS) showing an expression of a service gap. This confirms the importance of the reception staff/desk as has been advocated to be as important as other service windows in achieving patient satisfaction.[45]

For healthcare professional (HCP) parameters, the proportion of respondents who rated the components as "good" (score of =>3/5) were similar for both cohorts but the scores for NHIS were significantly lower than the GPC cohort. This suggests that HCP performance in NHIS was poor but majority of respondents were able to rationalize their realistic expectations as modulated by past experience and so expressed satisfaction. This is explained by the assimilation theory of consumer satisfaction where the consumer down regulates his expectation to the level of his experience thereby reducing the psychological dissonance caused by the gap between his ideal expectation and his experience.[25] It is also noteworthy that for both cohorts, health professionals performed better than structural and process service components similar to findings in some studies [36,37,38,46]This is contrary to the well known complaints about health care provider attitude.[41]However, even n studies that documented dissatisfaction with the attitude of health professionals in our health care system, users expressed overall satisfaction with services provided.[47,48]

The nurses in GPC were rated significantly higher on interpersonal skills (IS) confirming better perceived performance. In both cohorts, IS rating was comparably strongly correlated with rating of nurse professionalism. However, correlation with overall satisfaction was much lower in the NHIS than GPC cohort. This confirms the findings in numerous studies that interpersonal skills of the HCP is critical to the patients' perception of professionalism and why it is attributed as major cause of dissatisfaction where it is lacking.[19,49,50,51,52]

Among doctors, for clinical care parameters, the ratings were significantly higher in the GPC cohort, confirming better perceived performance than in the NHIS cohort. Correlation with professionalism, satisfaction with medical care, overall satisfaction with treatment and clinic services were correspondingly higher than in the NHIS group. This is attributed to the finding that in the GPC cohort, there was a match between the rating of clinical care components and rating of professionalism and satisfaction with medical care showing that respondents considered the quality of the content of the interaction with the doctor at par with the time and activities spent in the interaction. This is contrary to findings in the NHIS where, rating of professionalism and satisfaction with medical care were much less than rating of the time and activities of clinical care suggesting that content was not good enough. Also buttressing this is the finding that rating of professionalism and medical care had very low correlation with overall satisfaction with treatment and clinic services in the NHIS cohort unlike in GPC. This finding demonstrates that patients value and are able to assess both the technical and interpersonal skills of health care providers.[17,30,53]

Health literacy parameters were highly valued by both groups as information related clinical parameters were rated higher than other parameters and had correspondingly high correlation with overall satisfaction parameters.

Interpersonal skills of the doctors were rated significantly higher in the GPC than the NHIS cohort confirming better performance. However, correlation with professionalism and satisfaction with medical care was comparably high in both cohorts. This confirms the value attached to these attributes by patients, in keeping with the findings among nurses and confirming the findings in literature.[19,49,52]However, correlation with overall satisfaction with treatment and clinic services were much higher in GPC than NHIS depicting the impact of the low performance perceived by the NHIS cohort. Despite the low scores in interpersonal and clinical care parameters in the NHIS group, there was no expression of a service gap suggesting that, the respondents did not value these service components. This is contrary to expectations and findings in most literature which has established that the doctor component of care is the most important reason for seeking health care and has been confirmed in studies using the Kano Model.[17,24,]It therefore suggests that the respondents in the NHS group have calibrated their expectation downwards based on negative perceived realities from past experience and so can express satisfaction despite the poor rating of their experience with medical care as explained with the assimilation theory above and found in other studies.[54] Also using the Kano model, professionalism in doctors is considered a fundamental expectation, the absence of which causes a high degree of negative disconfirmation ("one dimensional attribute") with the capacity to cause considerable dissatisfaction and generalized negativity.[17,25]

The pharmacists in GPC were rated significantly higher on interpersonal skills and professionalism than NHIS confirming better perceived performance in GPC. In both cohorts, correlation with professionalism and satisfaction with pharmacy care was comparably high confirming the relationship between these variables as found among doctors and nurses. Correlation with overall satisfaction with treatment and clinic services were

highest than for other professionals (despite having lowest scores) confirming the value attached to drugs and pharmacist care among the patients in both cohorts similar to literature.[30] The value attached to health literacy was again demonstrated in both groups as the health information delivery by the pharmacist was rated highest with strong correlation with overall satisfaction parameters.

Comparison between Health Professionals

In GPC, the doctors had the highest rating for professionalism, correspondingly high rating for interpersonal skills, clinical care parameters and correlation with overall satisfaction parameters confirming perceived high performance and satisfaction among the respondents similar to findings in literature.[48] This contrasts with the findings in NHIS group where the doctors were outranked by nurses for professionalism, had a mismatch between ratings of clinical care parameters and overall satisfaction with medical care confirming perceived poor performance among the respondents. A Study in LMIC has shown that respondents who are satisfied with consultation are 1.8 times more likely to report overall satisfaction with services. Satisfaction with relationship with providers increases the odds of overall satisfaction by a factor of 3.[32] Given this finding, the impact of satisfaction with consultation could therefore explain the difference in the overall satisfaction of the two cohorts. Also the lack of expression of service gap for doctors evidenced by lowest correlation of Doctor professionalism with overall satisfaction parameters suggests that this component was not valued by the respondents. This is contrary to expectation and literature and confirms the perception of poor performance.[18,19,30,55,56,78] It calls attention to the interplay between ideal expectation, realistic expectation, past experience and satisfaction among the service users. The poor performance is explained by the fact that the doctors in the NHIS are of the medical officer cadre while in GPC, they are residents and consultants in Family Medicine specialty.[19,58,59,60] The difference in technical and interpersonal skills and quality of care is therefore expected. The lack of expression of service gap is probably due to two reasons: 1) past experience has modulated their realistic expectation downwards to correspond with the existing realities as explained by the assimilation theory.[25,61] 2) most of the patients who attend the NHIS clinic seek and obtain referrals to the secondary and tertiary care services in the hospital for definitive care of their problems while most of the patients in GPC receive complete definitive care and referrals only where really necessary. So in NHIS, where the patients' needs are met (referrals), they can express satisfaction despite rating the performance of the doctors low. This however has negative implications for the efficiency of the scheme as there is shifting of primary care problems and workload to secondary care with increased cost and morbidity.[3,12,14] It also reduces the patients' trust and increases the stress and cost of seeking care for the patients who have to make several visits instead of one with consequent loss of productivity among other opportunity costs. This has been noted to be a major cause of failure of the Primary Health Care system as designed in LMIC where primary care is equated to basic minimums in terms of personnel and equipment.[59] This has resulted in boycott of these facilities by communities in search of better quality care resulting in massive waste of resources.[12,14,62,63] The WHO in her 2008 thirty year review of the Alma Ata initiated primary health care system has established that OECD countries that embraced a Family Medicine based Primary Medical System offering specialised first contact personalized, comprehensive, continuing and coordinated care have had better outcomes.[58,59] This finding in this study confirms this in our locale and brings to attention the need to review our primary health care system in line with global best practices to facilitate the achievement of the "golden goal" of health for all. The inefficiency of the current system is a major factor deterring the success of the UHC and NHIS.[12,14,63] The investigation of the quality of care and patient satisfaction provides the needed evidence as has been done in Brazil where Family Medicine based primary care has been established.[30]

For both cohorts, structural and process quality components were rated much lower than the health professional parameters similar to findings in other studies.[36,37,46] However, the proportion of respondents who rated the process and structural components as "good" (a score => 3/5) were much less in the NHIS than the GPC cohort. This shows that more people were dissatisfied with the structural and process service components in the NHIS than in the GPC cohort. Unlike with the health professionals, the respondents in the NHIS cohort were unable to rationalize their expectations downwards (assimilate) and so did not express satisfaction with these components. This is also possibly explained by the Kano Model where such components as waiting area, registration process, canteen and lab facilities are regarded as "one dimensional" or "must be" categories and so poor performance results in severe dissatisfaction as found in a study in Ghana[24]

The process factors including waiting time, registration process, information provision and signposting to the lab, performed significantly higher in GPC than NHIS but the trend was similar for both groups: information scores were highest while waiting time and registration process were least rated confirming areas most in need of intervention. The difference in the rating of ease of getting lab results was not significant confirming the fact that both cohorts share the same lab facilities and validating the respondents' assessment. Correlation with overall satisfaction parameters was similar in both groups showing that both groups share same priorities regarding the service components but experience in NHIS was poorer than GPC.

Among structural service components studied, trend in priorities was similar for both groups but performance was significantly lower in NHIS than GPC. For both groups, cleanliness of the lab had highest scores and correspondingly highest correlation with overall satisfaction. Waiting area had the lowest score in NHIS but higher correlation with overall satisfaction than the canteen facilities and privacy of registration suggesting higher priority for these components among the respondents. There was expressed service gap for these components in the GPC cohort but not in the NHIS suggesting a sense of resignation or apathy in the NHIS cohort.[54] The waiting area for the NHIS clinic is actually small and unconducive compared to the GPC as the NHIS clinic was carved out of the GPC and so this rating being the least among structural components, confirms the existing reality. This is similar to findings by Daramola et al.[35]

It is however noteworthy that the canteen facilities and laboratory are shared by both groups but scores were much lower among the NHIS than GPC cohort. This can possibly be explained with the theory of generalised negativity where a negative disconfirmation of expectation for some attributes leads to generalisation of the negative appraisal to other attributes.[25] The importance of hospital environment is emphasised by some authors as good aesthetics, lighting and cleanliness reduces the stress of waiting for services.[45,57,64]

Pattern of Mean Scores of Rated Importance of Service Components.

The rated importance of six service components were explored. Cost of care was the least important for both groups. For the insured, it was in keeping with the fact of the minimal out of pocket expenses required of them. However, for the fee-paying clients it was instructive that they valued the quality of care received above the cost. For both groups, patient /provider relationship was next from the bottom. In both cohorts, HCP parameters were rated higher than process and structural components by majority of the respondents suggesting perceived good performance. This is contrary to general public opinion and some studies in Nigeria where HCP behaviour is a major cause of dissatisfaction.[38,41] The ranking here suggests that satisfactory experience with this parameter pushed priority to other service components. The GPC cohort assigned the highest rated importance to environment and staff competence as second possibly indicating area of greatest need in the context of having actualised satisfaction with the fundamental priority of medical care. The NHIS cohort rated drugs and facilities as most important and staff competence as fourth possibly reflecting their context of "unsatisfied" medical care compensated by the availability of drug /facilities. These findings suggest that patients re-order their priorities in realistic expectation based on "met expectations" in past service experience. Ease of administrative processes was rated second among the NHIS cohort in keeping with the known difficulties in administrative protocols of NHIS cited by other authors.[37,41,46] The GPC cohort cited this as fourth most important implying that the processes are less cumbersome. This demonstrates the need for intervention to improve the processes in the NHIS.

CALCULATED SERVICE GAPS (CSG):

The calculated service gaps for the health professional competence was lowest for the doctors and highest for the nurses in the GPC cohort. The reverse was the case in the NHIS cohort where the nurses had the lowest gap in keeping with their highest score for professionalism. However it is noteworthy that the difference in calculated service gaps for nurses in both groups was a minimal 13 points. This is remarkable and shows that the performance of the nurses in both groups was at par. This finding is further validated by the fact that the nurses in the two clinics are of similar professional qualification and capacity.

The difference between the calculated service gap for the doctors in both groups was 120 points demonstrating a major difference in their performance. This is buttressed by the fact of the difference in clinical acumen and performance normally expected between the medical personnel in both clinics: medical officers in NHIS and Family Medicine residents and consultants in the GPC. A similar trend was found between the pharmacists in both groups with a large difference of 121points. This may be attributed to the difficulties associated with accessing drugs from the NHIS clinics as cited by other authors.[34,38,40,46] The professional capacity of the pharmacists in both clinics are similar.

The interpersonal skill resources of the health care providers showed a high difference in CSG for doctors at 130 points, pharmacists at 110 points and low CSG difference for the nurses at 50points. This trend is similar to that found in the professionalism domain. The small CSG for nurses validates the respondents' assessment and utility of the service gaps. The adduced reasons are also same as above.

Calculated Service gaps for process components for both groups was higher than that for health care providers. The CSG for registration process in NHIS was higher than GPC by 267points. CSG difference for waiting time NHIS/GPC was 173points. These findings show that the GPC clinic performs better than the NHIS clinic. The existence of a well-organized patient flow management mechanism ensuring queue discipline in GPC may contribute to the better experience of the GPC cohort in these components. The CSG difference for lab results, NHIS/GPC was a minimal 14points. This narrow difference is remarkable and validated by the fact that both groups share the same lab facilities. This demonstrates validity of the respondents' assessment of the

service components and the utility of the calculated service gap as a means of comparing quality metrics of different clinics.

A similar trend was established among the structural service components with CSG for NHIS being higher than those for GPC. The difference for canteen facilities which is shared by both groups was small at 36 points further validating both the respondent's assessments and the utility of the Service gap. However, the CSG for cleanliness of the lab area was moderate at 78 points despite being a shared facility. The explanation for this is not readily obvious.

The decision factor for choice of the clinic was elicited by use of open-ended questions. For both groups, the decision factor was based on the perceived availability of quality care and personnel contrary to findings in Lagos where affordability was most important to respondents in a study of public and faith based primary care clinics.[65] However, in the GPC group, availability of good doctors was the most frequent specific factor (34% of respondents) while in the NHIS group, the doctor factor specifically accounted for only 8.7% (26 respondents). The NHIS cohort mentioned good professionals/staff at 20% (60 respondents) while this was lacking in the GPC cohort. The decision factor of good doctors in GPC was "satisfied" by the experience of the respondents evidenced by their ratings. The high overall satisfaction rating on the clinic services despite the poor experience of the other service components which had high calculated service gaps is attributed to a trade-off effect of the satisfaction with the doctor component similar to other studies.[32,66] This represents a major "met expectation/need" and is in keeping with literature which has established the doctor component as the principal expectation for seekers of health services.[14,56,57] This trend is contrary to that in NHIS where less than 10% of the respondents gave priority to the doctor component of service contrary to expectations and literature cited above. The "unmet expectation" of doctor component in NHIS is reflected in the lack of service gap expression for the low rating of doctors and consequent generalized negativity in the global low rating of service components without any compensating trade off effect on overall satisfaction rating. It is attributed to the effect of past experience modulating realistic expectation and therefore satisfaction rating. The reason these enrolees continue to use this clinic despite perceived inadequacies needs to be explored. This can be attributed to a number of factors including the fact that the clinic provides referral access to definitive care in the secondary and tertiary units of the hospital which is the premier tertiary hospital in the geopolitical zone. This however results in referral of conditions that should be managed at primary care to higher levels resulting in poor efficiency of resource utilization.[14,32] Another reason could be the prevailing poor quality of hospitals and services across the NHIS as cited in literature and lack of effective complaints system, limiting their choice and "voice."[7,23,67] The critical need for entrenching continuous quality improvement incorporating patient voice in user satisfaction surveys and complaints system in the NHIS as in other LMIC is therefore demonstrated.[30] This would encourage rapid improvement in quality of services, increased population enrolment towards universal coverage, effectiveness and efficiency of the scheme and positive population health outcomes.

V. Conclusion

The patient perception of the quality of services in the NHIS clinic is poor compared to that in the fee-paying clinic. Health care providers performed better than structural and process service components for both clinics but the doctors in the fee-paying clinic performed much better than in the insured clinic. This was the critical differentiating factor, offering a positive trade-off effect on structural and process service components in the fee- paying clinic and negative effect in the insured clinic. The difference lies in the fact that Family Physicians provide definitive high quality care in the fee-paying clinic unlike that delivered by medical officers in the insured clinic.

Patient centred benchmarking and Service Gaps proved to be a useful and valid tool for comparing the satisfaction rating of the different clinics and also the dynamics of realistic expectation, experience and satisfaction.

Limitations: the dynamics of expectation, experience and satisfaction in this study were not subjected to statistical analysis due to limitations in the full understanding of what available statistical tools to employ. However, this study represents the beginning in the exploration of this dynamics and the foundation for further studies to establish these in the future.

VI. Recommendations

There is urgent need for the NHIS to incorporate continuous quality improvement strategies in the operations of the scheme to ensure efficiency and attainment of the goals on Universal Health Coverage. Using the Patient- centered benchmarking and Service Gap offers a mechanism for benchmarking and measuring quality of services, tracking improvement efforts and comparing same among hospitals in the scheme.

The NHIS should adopt Family Physician led Primary Medical Care services to improve quality of care, patient satisfaction, efficiency and outcome of the scheme.

Continuous quality improvement plans in the index facility should address the professional capacity of the doctors in the insured clinic by engaging Family Physicians to improve efficiency and patient satisfaction.

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