Original Article

An Exploratory Study of Patients' Perceptions of Responsiveness of Tertiary Health-care Services in Southeast Nigeria: A Hospital-Based Cross-Sectional Study

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Abstract

Background: The achievement of universal health coverage in Nigeria requires evaluating the extent the expectation of those who have utilized health-care services are met. The study assessed the level of clients' perceived responsiveness of tertiary hospitals in the provision of specialist health-care services in Nigeria. **Methods:** A hospital-based, cross-sectional study was conducted among adult patients and caregivers of children on admission in three tertiary health facilities in Southeast Nigeria. Data were collected from 137 respondents using a questionnaire that was adapted from the World Health Organization-structured responsiveness questionnaire. The key variables were on (a) respect for persons (dignity, confidentiality, and autonomy of individual) and (b) client orientation (prompt attention, access to social network during care, quality of basic amenities, and choice of provider), and data were analyzed using multivariate methods. **Results:** The choice of care provider (80.0%) and autonomy (80.9%) were the lowest perceived responsiveness domains while prompt attention (89.2%) and dignity (87.7%) were rated highest by respondents. Multivariate analysis found significant association between gender and some responsiveness domains such as autonomy ($P = 0.024$), prompt attention ($P = 0.003$), and quality of basic amenities ($P = 0.015$) and between occupation and prompt attention ($P = 0.034$). **Conclusions:** Many critical aspects of specialist services in tertiary hospitals do not respond to clients' need while some do. It is important that poorly performing domains of services are strengthened, especially with upgrading the quality of basic infrastructure so as to improve the performance of the tertiary hospitals.

KEYWORDS: *Inpatient services, responsiveness, Southeast Nigeria, tertiary hospitals*

INTRODUCTION

The responsiveness of a health system, together with fair financing and quality of health care, comprises the framework for assessing the health system.[1] The World Health Organization (WHO), in 2000, identified responsiveness to expectations of patients as key in assessment of any health system performance.[2]

The extent to which patients' expectations are satisfied determines the likelihood of utilizing the same facility in the future, as well as recommending it to others. Hence, improvement in the responsiveness of health-care systems will improve the health-seeking behavior of patients, to seek health care from health facilities to improve their health status,[3] and this will subsequently improve the universal access to health care.[4,5]

Responsiveness is distinct from patients' satisfaction; patient satisfaction considers patient expectation, presumed needs, and experiences,[3] on both the nonmedical and medical aspects of health system while responsiveness takes a holistic view of any health system, evaluating only the nonmedical aspects of health-care services from an individual perspective.

There is a paucity of literature on the responsiveness of the health system, especially with regard to specialist

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services that are provided by tertiary hospitals in Nigeria. There are numerous studies on the quality of health care[6,7] and fair financing[8-10] in Nigeria, but very few studies[11-13] have been conducted on the responsiveness of health-care system in Nigeria.

This paper provides new information about the responsiveness of tertiary health-care facilities in Southeast Nigeria. It is noted that evidence on patient satisfaction metrics will be important platforms for health-care reform interventions that will improve the quality of services in tertiary hospitals and aid the achievement of universal health coverage.

METHODS

Study area: There are four major tertiary hospitals, namely, the University of Nigeria Teaching Hospital (UNTH), Enugu State University Teaching Hospital, National Orthopedic Hospital, and Federal Neuropsychiatric Hospital (FNH) located in Enugu metropolis, Enugu State. There are seven district hospitals scattered all over Enugu and at least one health center or cottage hospital in each of the 17 local government areas. These facilities send referrals to the tertiary hospitals.

There are two tertiary hospitals in Abia State, namely, Federal Medical Centre (FMC), Umuahia, and Abia State University Teaching Hospital (ABSUTH), Aba. The FMC, Umuahia, is situated in Umuahia metropolis, Abia State, and it is federal government facility while ABSUTH is situated in the commercial town of Aba and it is state-owned health facility. Both hospitals receive referrals from different primary and secondary health-care facilities all over Abia State and the neighboring states, namely, Imo, Akwa-Ibom, and Rivers. The hospital renders both nonspecialized care at the outpatient clinics and specialized care at the specialist clinics and wards.

The study was conducted in Southeast Nigeria. Three third-tier hospitals: UNTH and FNH, both located in Enugu metropolis, Enugu State, and FMC, Umuahia, Abia State, were randomly selected; two from the four third-tier hospitals in Enugu State and one from the two hospitals in Abia State. The UNTH, FNH, and FMC have bed capacities of 702, 120, and 405, respectively.

STUDY DESIGN

A cross-sectional survey was conducted using patient-oriented questionnaire adopted from the responsiveness standard module, the WHO questionnaire. The questionnaire comprised seven conceptual domains: Dignity/communication, autonomy, confidentiality, prompt attention, access to social support networks, quality of basic amenities, and choice of care provider-each domain with different questions and their scale score.[3]

The questions elicit users' perception of the utilized health-care services and their perceived importance of the domains.[14] The questionnaire was translated in the local language (Ibo) and a pretest was conducted after which a modified version of the questionnaire with English and Ibo versions was developed and used for the study.

The study was carried out from January to April 2014. The minimal sample size was obtained after two-staged calculation. The initial sample size of 132 was obtained using Epi Info (Epi Info, Centers for Disease Control and Prevention, Atlanta, Georgia, USA) with input of response rate of 64.4%,[15] 95% confidence interval, and power of 80%. Since the estimated total population of study subjects: Adult patients or caregivers of children, expected to be on admission in the three tertiary hospitals at any given time are below 10,000 and since the combined bed capacity of the three hospitals is 1227 beds, a minimum sample size for the study was recalculated using the following formula:

$$n_f = \frac{n_o}{1 + n_o / N}$$

where n_f = final sample size, n_o = initial sample size of 354, and N = estimated number of the subjects expected to be on admission during the study and qualified to participate. This gave a final minimal sample size of 132 subjects from each studies health facility. The subjects were randomly selected from the three tertiary hospitals in Southeast Nigeria. The major inclusion criteria were (1) subject who has been on admission for at least 7 days in the wards or for 2 days in the emergency ward and (2) the subject had utilized any other services of being rendered by the hospital in the past 5 years.

CONCEPTUAL FRAMEWORK

The two major components of responsiveness are (a) respect for persons (dignity, confidentiality, and autonomy of individual) and (b) client orientation (prompt attention, access to social network during care, quality of basic amenities, and choice of provider). It is upon these domains that in 2000, the WHO developed a standardized framework for assessment of responsiveness of any health system,[1,16,17] and these domains have subdomain questions [Figure 1]. This instrument is designed for assessment of a health-care system as a whole, not for specific health-care facilities. Several studies have tested this concept and found it applicable in different health-care services.[13,15,18] However, for a reform to be effective and bring about a desired change, it has to be based on a micro or small unit-level indigenous evaluation or analysis, rather than large-scale or global-level evaluation, as such evaluations will be more specific and address situation existing in such each context.

DATA COLLECTION

The traditional even (4)-numbered response categories of Likert scales were used to assess the responsiveness domains.[19] The Likert scale is an ordered scale from which respondents choose an option that best aligns with their view.[19] The idea of adopting even-numbered response categories is to have a balanced number of positive and negative options as well as prevent giving people an "out" and makes them more thoughtful in their responses.

DATA ANALYSIS

During analysis, the scores of the subdomain questions were categorized into two groups "very poor" and "poor" in one group while "good" and "very good" in another group. This modification created binary variables. The scores obtained from the rating score for each domain graded from 0 to 10 based on level of importance were "very important" (≥9), "important" (6-8), and "not important" (≤5). The relationship between the scale rate of the responsiveness domains and the demographics characteristics such as gender, age, and occupation of the respondents was evaluated using linear regression analysis. $P \leq 0.05$ was considered statistically significant. Statistical Package for Social Sciences (SPSS) version 20 (IBM SPSS Statistics for Windows, Version 20.0 Armonk, NY: IBM Corp.) software was used for statistical analyses of the collected data.

The Ethics Committee of the UNTH gave approval for the study. Written informed consents were obtained from study participants.

RESULTS

A total of 175 patients were identified to participate in the survey and 15 refused to participate, resulting in a cooperation rate of 91.4%. Of the 160 patients who accepted to participate, 10 were not eligible; therefore, 150 patients were interviewed. Out of 150 questionnaires administered, 13 questionnaires were not completed, resulting in 137 completed questionnaires that were analyzed [Figure 2]. This gave a response rate of 78.3% (137/175). The distribution of the respondents is as follows: 49 respondents from UNTH and 43 from neuropsychiatric, both in Enugu, and 45 from FMC, Umuahia. Most of the respondents were employed in the formal sector 60/137 (44%). Majority 99/137 (72%) of the respondents were females, and 93/137 (68%) of the respondents were within the age range of 20-29 years" [Table 1].

Table 1: The demographic characteristics of the respondents

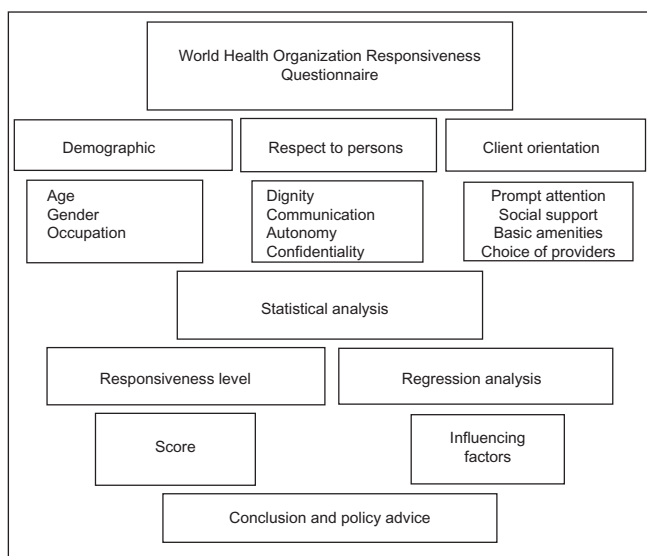| Variables	n=137 (%)
Occupation	
Unemployed/student/petty trader/farmer/laborer	40 (29)
Formal sector (teacher/civil servant/retiree)	60 (44)
Informal sector (business/private sector employee)	37 (27)
Gender	
Male	38 (28)
Female	99 (72)
Age (years)	
20-39	93 (68)
40-59	41 (30)
>60	03 (02)

Figure 1: Framework for the evaluation of responsiveness in tertiary health facilities in Southeast Nigeria (Modified from doi: 10.1371/journal. pone. 0062923.g001)
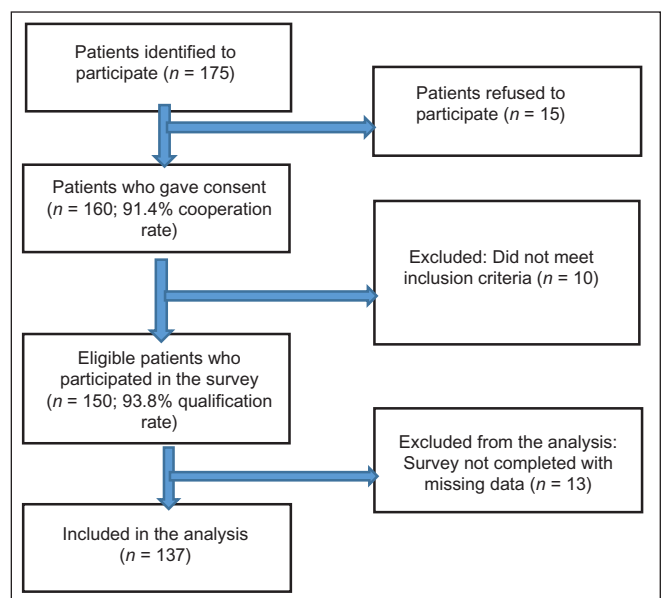

Figure 2: Sample selection framework

The overall responsiveness scale rate for "good" or "very good" was 59% (81/137). In their response to scale rating, most participants reported responsiveness of the services they received as "good" or "very good" in most of the domains, except in "choice of care provider"

Table 2: Respondents' experiences (rating) of the responsiveness domains

Components of responsiveness (domains)	Very poor/ poor (%)	Good/very good (%)
Dignity	62 (45)	75 (55)
Treated respectfully	82 (60)	55 (40)
Regards to human rights	74 (54)	63 (46)
Privacy during treatment	71 (52)	66 (48)
Communication	55 (40)	82 (60)
Encouraged to discuss their concerns	59 (43)	78 (57)
Encouraged to ask questions about disease, treatment, and care	63 (46)	74 (54)
Autonomy	64 (47)	73 (53)
Information on alternative treatment options	82 (60)	55 (40)
Consulted about their preference over alternative treatment options	71 (52)	66 (48)
Sought consent prior to testing or starting treatment	60 (44)	77 (56)
Confidentiality	44 (32)	93 (68)
Consultation carried out in manner that protects patient confidentiality	55 (40)	82 (60)
Preservation of the confidentiality of patients information	44 (32)	93 (68)
Prompt attention	64 (47)	219 (53)
The facility geographically accessible (traveling time)	77 (56)	180 (44)
Length of time spent waiting for consultation/treatment	84 (61)	159 (39)
Access to social support	44 (32)	93 (68)
Access to visitors	73 (53)	64 (47)
Personal needs taken care of by friends and family	49 (36)	88 (64)
Involvement in religious activities	62 (45)	75 (55)
Quality of basic amenities	63 (46)	74 (54)
Cleanliness of health-care units	41 (30)	96 (70)
Maintenance of buildings in health-care units	49 (36)	88 (64)
Adequacy of furniture in health-care units	75 (55)	62 (45)
Nutrition and edibility of food provided	73 (53)	64 (47)
Access to clean water	59 (43)	78 (57)
Cleanliness of toilets	84 (61)	53 (39)
Cleanliness of linen	60 (44)	77 (56)
Choice of care provider	95 (69)	42 (31)
Choice between health-care providers	106 (77)	31 (23)
Choice between health-care units	104 (76)	33 (24)
Opportunity to see a specialist	90 (66)	47 (34)
Overall responsiveness score	56 (41)	81 (59)

that 69% rated it "very poor" or "poor" [Table 2]. The domains rated best-performing were confidentiality (68.9%), access to social support network (63.2%), and dignity (60.2%) while the choice of care provider (41.9%), autonomy (55.3%), basic amenities (55.6%), and prompt attention (55.9%) domains were rated as the worst-performing.

The domains were assessed based on the respondent's experiences and considering the overall score for each responsiveness domains. Majority of the domains were rated to be important; prompt attention (89.2%), dignity (87.7%), confidentiality (86.7%), basic amenities (83.9%), communication (83.3%), autonomy (80.9%), and choice of care provider (80.0%), except access to social support that has an overall mean of rating 76.6% [Figure 3]. No variation was observed when evaluated according to three-category scale ranging from "not important," "important," and "very important;" the same trend was maintained when the proportion of each domain that was rated as "very important;" prompt attention (71%), confidentiality (68%), dignity (67%), and communication (6%). Access to social support (40%) and choice of care provider (49%) have relatively the lowest score for being "very important" [Table 3].

Considering experienced domains and demographic characteristics of the respondents such as gender, age, and occupation [Table 4], male respondents reported higher autonomy compared to females ($P = 0.024$). Female respondents were more likely to express that they received prompt attention than males ($P = 0.003$). Further, female respondents were more likely to assess the basic amenities of health-care facilities as poor compared to the males ($P = 0.015$). Neither age of the respondents nor their occupation had any relation with the assessment of any responsiveness domain.

At level of significance of < 0.1 ($P = 0.092$), the well-to-do were more likely to report low level of "prompt attention" compared to respondents in formal sector (middle class) and the nonmeaningfully employed (poor).

As shown in Table 4, respondents who are in the informal sector (well-to-do) are more likely to consider "prompt attention" as very important than those employed in the formal sector (middle class) and those who are not meaningfully employed (poor).

At level of significance of <0.1 ($P = 0.097$), males were more likely to consider "autonomy" to be important compared to female respondents. Females were more likely to consider "confidentiality" to be important compared to males.

Table 3: The rating of each responsiveness domains in terms of importance by the respondents

Domains responses	Dignity (%)	Communication (%)	Autonomy (%)	Confidentiality (%)	Prompt attention (%)	Access to social support (%)	Quality of basic amenities (%)	Choice of care provider (%)
Not important	10 (7)	14 (10)	19 (14)	10 (7)	10 (7)	33 (24)	12 (9)	23 (17)
Important	36 (26)	33 (24)	45 (33)	34 (25)	30 (22)	49 (36)	45 (33)	47 (34)
Very important	91 (67)	90 (66)	73 (53)	93 (68)	97 (71)	55 (40)	80 (58)	67 (49)

Table 4: Multivariate analysis of influences on the responsiveness domains

Responsiveness domains	Gender			Age			Occupation		
	Coefficient	SE	*P*	Coefficient	SE	*P*	Coefficient	SE	*P*
Experienced domain									
Dignity	0.108	0.517	0.298	−0.121	0.249	0.250	0.041	0.306	0.690
Communication	0.115	0.522	0.277	−0.155	0.222	0.121	0.023	0.265	0.881
Autonomy	0.234	0.456	0.024	0.053	0.219	0.608	0.116	0.270	0.253
Confidentiality	0.134	0.480	0.202	0.066	0.231	0.532	0.008	0.282	0.941
Prompt attention	−0.305	0.412	0.003	−0.024	0.198	0.814	0.167	0.244	0.092*
Access to social support	0.071	0.414	0.497	0.098	0.199	0.353	0.025	0.245	0.807
Quality of basic amenities	−0.251	0.478	0.015	0.103	0.230	319	0.022	0.283	0.824
Choice of care provider	−0.108	0.517	0.298	−0.121	0.249	0.250	0.041	0.306	0.690
Importance of the domains									
Dignity	−0.072	0.372	0.491	0.158	0.179	0.136	0.007	0.220	0.944
Communication	0.027	0.595	0.776	0.211	0.259	0.145	0.056	0.287	0.665
Autonomy	0.173	0.530	0.097*	0.086	0.255	0.411	0.065	0.314	0.523
Confidentiality	0.200	0.449	0.054*	0.019	0.216	859	0.055	0.266	0.591
Prompt attention	0.071	0.371	0.487	0.020	0.178	0.850	0.217	0.220	0.034
Access to social support	0.018	0.494	0.866	0.050	0.238	0.636	0.098	0.293	0.343
Quality of basic amenities	−0.130	0.480	0.209	0.079	0.231	0.450	0.158	0.284	0.123
Choice of care provider	−0.146	0.476	0.164	0.119	0.229	0.260	−0.012	0.282	0.908

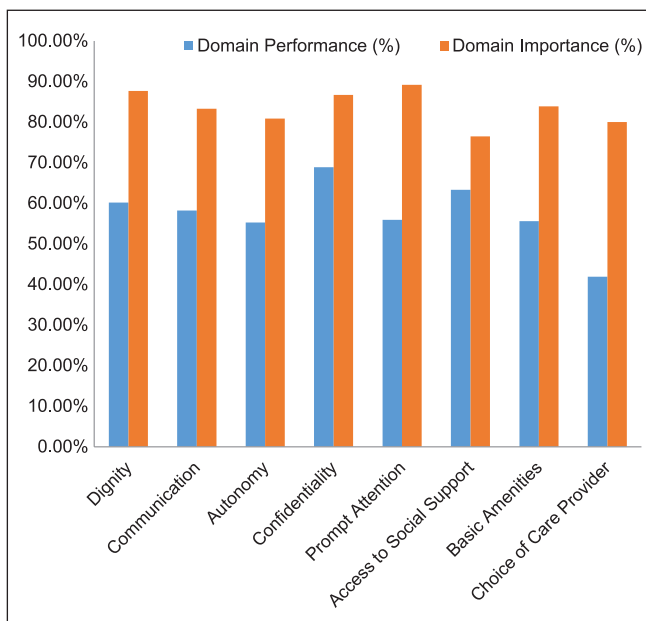*Significant at *P*=0.1. SE=Standard error

Figure 3: The score rate of both the experienced domains and their (domains) presumed importance by the respondents

DISCUSSION

The findings show that the choice of a health-care provider was the worst performer among the domains. This finding is expected in a system where patients are assigned to a provider not by choice made by the patient but by whoever is the provider on duty on the day the patient presented for the first time. Hence, patients lack the option of choice with regard to physician to manage their condition. Although in the prospectus of the National Health Insurance Scheme (NHIS), patients have the opportunity to choose and change health-care providers, this is rarely observed. One of the major reasons is that the NHIS only covers those employed in the federal parastatals which are <5% of the workforce. In addition, due to the minimal number of disease conditions covered in the insurance policy and the rigorous logistics of accessing the coverage, most people choose not to use the NHIS. Thus, as long as the patient continues to receive care from the facility, he/she remains a patient of the same provider, with little or no room to change care provider. This reduces the providers' effort to

satisfy patients' needs, which may have been the case if there was an option of switching providers if patients were not satisfied.

The autonomy domain was highly rated to be important but poorly scored from experience. The same trend has been reported by Mohammed *et al.*[11] and Adesanya *et al.*[12] The poor performance of autonomy is expected when there is high provider-patient asymmetry of health information. Health-care providers hardly spend time to educate the patients on their health outcome.[20] This finding underscores the need to observe the medical ethics that recognizes that patient should consent and approve most health services they are to receive. Fundamental to this is that the health-care provider should explain to the patient in reasonable detail all the tests and treatment he/she is being subjected to and seek approval before proceeding with the treatment. This study also showed that males were more contented with autonomy domain compared to the females.

The prompt attention domain was highly rated to be important and poorly scored from experience. This is similar to what several studies have reported.[11,17,21,22] This prompt attention is a product of long waiting time in the clinics and travel time to the facilities.[3] This poor performance of the "prompt attention" domain could be attributed to lack of utilization of appointment for nonemergency visit to clinics.[23,24] Therefore, patient visits the clinic anytime they deemed it fit. Since time-specific (stream) scheduling is not commonly practiced in most developing countries, patient visits the clinic anytime in the day of appointment are not time-specified (stream) scheduling, as it is done in developed countries.[25] Thus, majority of the patients who come to clinics have to wait a long time before being reviewed. If a patient wants to be among the first to be reviewed by a health-care provider, he/she will have to be in the clinic early before the clinics open for consultation. Therefore, whichever way, there is always a delay. A local study has shown that an average waiting time in a clinic is 6 h 10 min.[26] Nonetheless, female respondents were more likely to express that they received prompt attention than male. An explanation to this may be that since women have higher utilization of health-care services than men,[27,28] they already expect some form of delay in the hospital compared to their male counterparts that sparingly utilize the hospital.

Female respondents were more likely to assess the basic amenities of health-care facilities as poor compared to the males. This is similar to what Mohammed *et al.*[11] reported. This means that improvement in the quality of amenities in tertiary health facilities will go a long way in attracting patients to utilize such facilities. This finding is supported by a report that one of the reasons why private health facilities are commonly utilized is due to the quality of facilities available in such facilities.[12] Some studies have shown that patients' choice of a health-care provider does not always correlate with the time of travel to the health-care facility or the expected outcome measures, but rather based on the quality of amenities available.[29] However, this patients' attraction to amenities and resultant quest by health providers to improve their amenities has to be matched with improvement in the quality of health care received. A balance has to be maintained so as not to achieve improvement in amenities at the expense of improvement in the quality of care.

One major limitation of this study is the restricted geographical area of this study, a more expanded study involving all the six geopolitical regions of the country is encouraged. Nonetheless, micro study still has its inherent advantage, by delineating situation obtainable in a smaller population, makes intervention effective than intervention based on global conclusion. Second, the opinion of patients while receiving care may better represent the situation in the health facilities but may not reflect opinions of those yet to experience the services of these health facilities which comprise a significant proportion of the general public. However, majority argued in favor of using patients since they are in a position to value the services of a health facility. The response from peoples may be dependent on their vantage position.[30] Therefore, a response which may be suitable while experiencing a situation may not be so when out of such situation and environment. However, those who are going through a situation in real time have a vivid presence of mind and more convinced in their response than those responses given out of recall, with the negative effect of recall bias. Another limitation is the variability of the respondents included in the study: More females than males were sampled. Although this could be attributed to the high proportion of female who were caregivers to both children and adult patients who could not respond to the survey by themselves.

CONCLUSIONS

The overall rating of the responsiveness of assessed tertiary health services shows there is room for improvement. Health sector reform should enact policies focused on these domains: Basic amenities, autonomy, and choice of health-care provider to bring the much-desired improvement. These can be accomplished by injecting resources to improve the quality of the existing basic amenities, training health-care providers on pertinent responsiveness issues, especially treating patients with respect, as well as implement the option of patients being able to choose or change the health-care provider of their choice, as already stated in the prospectus of the

NHIS as a routine. The domains of "prompt attention," "confidentiality," and "dignity" were priority in terms of importance. These areas can be augmented by reforms such as introducing time-specified (stream) scheduling appointment for nonemergency visits and institution of measures to improve privacy and confidentiality while receiving care, as well as reduction in the asymmetry of information by encouraging providers to involve patients more in their health-care decision and processes.

Conflicts of interest

There are no conflicts of interest.

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