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Client Waiting Time in an Urban Primary Health Care Centre in Lagos.

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Keywords

Client waiting time

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Flow analysis

ABSTRACT

Background: Primary Health Care is the usual entry point into the health system and has the potential to touch the lives of most people. However one of the reasons for poor uptake of health services at primary health care facilities in Nigeria is long waiting time. This study was carried out to assess client waiting time and attitude towards services received at an urban Primary Health Centre in Lagos State.

Methodology: The study design was quasi experimental (before and after) with a descriptive, cross sectional study component. Client flow analysis and client exit interviews were conducted among consenting patients attending the General Out-patient Clinic within the first 2 weeks of July 2013, using flow analysis charts and an interviewer- administered questionnaire. Four doctors from the Teaching Hospital's Department of Community Health started attending to patients as the intervention, and the flow analysis charts were administered in the immediate post intervention period. Analysis was conducted using the statistical package for social sciences version 19.

Results: The majority of clients interviewed were females (80%). Client waiting time was long with patients spending an average of 137.6±70 minutes before seeing a doctor for an average of 8.6±12 minutes. Over 90% of clients had a favourable attitude towards the services received at the PHC, although 54.3% felt improvements were needed. The waiting time reduced to an average of 88.7±45 minutes upon an increase in the number of doctors providing medical consultations.

Conclusion: Reducing client waiting time at Primary Health Care centres is achievable and may improve patronage and ultimately serve as a cost effective strategy in health care delivery on a national scale.

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INTRODUCTION

Primary Health Care (PHC) has been adopted and adapted by individual governments in most countries all over the world, as a key strategy to ensure greater coverage and equity.[1] PHC is essential health care based on practical, scientifically sound, and socially acceptable cost effective methods and technology.[2] PHC involves community participation, integration of services and programs, intersectoral collaboration, all with the aim of ensuring health care is brought to the very door steps of communities.[2] Primary Health Care is the bedrock of the National Health Policy in Nigeria.[3] It is usually the entry point into the health system and has the potential to touch the lives of most people, particularly at the grassroots of Nigerian communities where health needs are most acute and intense.[3]

However, over and over again, this level of health care has been described as the weakest.[4,5] Recent assessments of our national health indices show that Nigeria lags behind many African countries including Ghana and South Africa. [6] Public confidence and trust in the primary healthcare is low as is evidenced by poor uptake of services.[5] There are evidences to show that long waiting time is one of the factors responsible for poor uptake of health services.[7,8] Studies have shown that when medical practices work to continually minimize client waiting time, it results in overall improvement in patient satisfaction.[9,10,11] And when patients have to wait for long periods before they are seen, they are less likely to make use of the health services.[12] A major reason from the patients' point of view in a study conducted in Sokoto State, Nigeria for why patients have to wait for long periods before seeing a doctor was as a result of the

large number of patients in relation to the few number of doctors available to see them.[12] Majority (69%) of these clients waited for over an hour with a mean waiting time of 85 minutes.[12] Mean client waiting time in other centres in Nigeria have been found to be about 131.1 minutes among women attending antenatal clinic in PHCs in Sagamu Local Government Area (LGA) of Ogun state, 49 minutes among patients attending private hospitals in Lagos (probably on account of the smaller number of clients who can afford to patronise the private facilities) and 127 minutes among patients attending the General out-patient clinics of Lagos University Teaching Hospital (LUTH) and General Hospital, Marina, Lagos, with some clients spending up to 3 to 4 hours while accessing care at a PHC in Pakoto, Ogun State.[13,14,15] A study conducted in Aminu Kano Teaching Hospital revealed that the highest proportion of dissatisfied clients (30%) were dissatisfied on account of client waiting time.[16] Client waiting time in other countries has been found to be as long as over 2 hours in Malaysia, to about 42.89 minutes in a maxillofacial clinic in Australia.[17,18] A waiting time maximum of 30 minutes is recommended in the British Patient charter.[19]

Unless there is a drastic change in the performance of our health system particularly at PHC level, long waiting time will discourage use, and our health indices will continue to be poor.

The department of Community Health and Primary Health Care (CH & PHC) of the Lagos State University College of Medicine and Teaching Hospital (LASUCOM and LASUTH) is charged with the training of Medical students and Resident doctors in all aspects of Public health. The activities of the department are also expected to impact the immediate community and the state as a whole. Part of the mandate of the department is to support the cause of Primary health care as the pillar of the Nigerian Health care system. This led to the adoption of Rauf Aregbesola Flagship PHC (RAFPHC) as the urban health care centre by the department and subsequent assessment of the facility, an aspect of which is detailed in this study.

AIM AND OBJECTIVES

The general aim of the study was to conduct a baseline assessment of the facility to inform and guide the Department's management of the PHC.

The specific objectives were to assess patient's attitude towards services provided at the facility, assess client waiting time and determine the effect of additional doctors from LASUTH working at the PHC on client waiting time.

METHODOLOGY

Background

Rauf Aregbesola Flagship PHC is located in Mosan Okunola Local Council Development Area (LCDA). The LCDA was carved out of Alimosho Local Government which has an estimated 2,047,026 inhabitants.[20] The LCDA came into existence following the creation of 37 additional LCDAs by an act of the State House of Assembly on the 23rd of October, 2003 by the then Executive Governor of Lagos State.

Mosan Okunola LCDA has a cosmopolitan setting and it is inhabited predominantly by the Aworis,Egba/Egbados and Ijebu. However, people from all geopolitical zones of the country are also found living in the area. It is a densely populated area, bounded in the North by Ayobo, Ipaja and in the South by Agbado Oke-odo Local Council. The eastern border is with Egbe- Idimu while it has Alimosho Local Government on the west.

Rauf Aregbesola Flagship PHC (RAFPHC) was commissioned on Tuesday, April 11, 2013. It is one of 57 flagship facilities to be launched across the State. It is the second 24 -hour Primary Health Care Centre in Mosan Okunola Local Council Development Area (LCDA). It was established with the aim of providing quality health care to Mosan-Okunola residents.

Study design

The study design was basically descriptive and cross sectional with quasi experimental (before

and after) study components using quantitative methods.

Study population

The study population for client flow analysis and client exit interviews were selected from among the patients attending the General Out-patient Clinic within the 1st 2 weeks of July 2013.

Sample size determination

The required sample size was calculated using the formula for comparing proportions:21

$$n = \frac{(Z\alpha + Z\beta)^2 \{[P_1(1-P_1)] + [P_2(1-P_2)]\}}{[P1 - P2]^2}$$

Where **Zα** = Significance level at 5% (1.96) Standard normal deviate

Zβ = Power at 80% (0.84)

Type of test = 2 sided

P_2 = proportion of clients whose waiting time was less than 1 hour (from a previous study) (31%) 12

P_1 = Anticipated proportion of clients with waiting time less than 1 hour after an increase of 80% from an initial 31% (0.31+0.248=0.558)

$P_1 - P_2$ = size of the difference of clinical importance

n = sample size required for each group

Minimum sample size calculated was 59. Twenty percent (20%) of this was added to make up for incompletely filled charts and non response making 71.

Sampling method

All consecutive clients who visited the GOPD section of the facility in the 1st week of July 2013 (excluding weekends) and met the inclusion criteria were given the flow analysis chart to be filled by health workers who attended to them for the baseline assessment.

Those who visited in the 2nd week of July 2013 when four doctors from LASUTH started consulting were also given the flow analysis chart (immediate post intervention period). Every other client (alternate) who exited the GOPD section between the hours of 9am-1pm in the 1st week of July 2013 and gave verbal consent had the client exit interview questionnaire administered to them.

Inclusion criteria: Respondents must be 18 years of age or above to respond to the exit interview. The flow analysis chart was given to the parents or relation who accompanied minors to seek treatment at the facility.

Respondents who required emergency treatment were excluded from the study.

Survey instruments

A structured interviewer- administered client exit interview questionnaire for assessing patient attitude and perception of services. A patient flow analysis chart to assess client waiting time adapted from the Client Oriented Provider Efficiency (COPE) tool book by Engenderhealth and modified accordingly. 22

Method of data collection

Client flow analysis charts were handed over to clients at the reception after time of entry was written on it. Clients were asked to give the chart to each health worker who attended to them, and it was collected back while exiting the PHC. All health staff had been informed to indicate times of starting and ending interactions with each client after synchronization of watches. Client exit questionnaires were administered at the exit point from the PHC between 9am and 1pm by 2 of the researchers and 2 research assistants (medical officers from LASUTH). The research assistants were trained a day prior to data collection.

Data analysis

Analysis was done using Statistical Package for Social Sciences (SPSS) version 19. Tests of significance were performed using a 95% confidence interval, and the level of significance

set at 0.05. Outcome measures included mean duration of time from arrival to seeing the doctor, and from arrival to exit from facility, proportion of clients whose waiting time to see the doctor was less than an hour, attitude of respondents to services received at the facility and perception of clients about improvements required if any.

Ethical considerations

Permission was obtained from the Chairman and Medical officer of health. Informed verbal consent was obtained from each respondent prior to data collection.

Respondents were also assured of the confidentiality of data collected and were provided the option of withdrawal at any point during the survey.

Limitations

There was no assessment of clients' perception of how long would be an appropriate or acceptable waiting time to see the doctor. The study duration was rather short as we needed to start helping out quickly to reduce the patient load in the facility. Courtesy bias may also have occurred.

Another limitation which should be addressed in further research was an assessment of patient attitudes after instituting interventions to reduce client waiting time.

RESULTS

A total of 375 clients were given the client flow monitor charts. But 68 forms discarded on account of improper filling (omission of time of entry into facility and time client got to the Doctor). A total of 307 charts were analyzed, 248 before intervention and 59 after intervention. Exit interview questionnaires were administered to 70 clients.

Clients seen pre and post intervention were not significantly different from each other with regards to their gender as seen in Table I.

Post intervention as seen in Table II, clients got to see the doctor faster, and eventually exit the facility faster, and the time differences were statistically significant.

At initial assessment, 15.3% of clients saw the doctor in less than one hour of waiting, while 28.8% of clients did so in the immediate post intervention period.

About a third (29.4%) of clients at baseline had to wait for over 3 hours before seeing the doctor, while 3.4% of clients waited this long in the immediate post intervention period. These differences were statistically significant. (Table III).

There was no statistically significant association between gender, type of visit and time interval of waiting to see the doctor.

Table IV shows that the majority of clients interviewed were females (80%), and 61.4% belonged to Yoruba ethnic group. Over three quarters (77.1%) of clients interviewed were single.

Table I: Client characteristics (flow chart)

Gender	Baseline Assessment (N=248) Freq(%)	Immediate post Intervention (N=59) Freq(%)	Test of significance	P - value
Male	86(34.7)	22(37.3)	$x^2 = 0.142$	0.706
Female	162(65.3)	37(62.7)	df = 1	
Type of visit				
First time	137(55.2)	31(52.5)	$x^2 = 0.010$	0.921
Follow-up	77(31.1)	18(30.5)	df = 1	
Visit type unstated	34(13.7)	10(17.0)		

Table II : Mean duration of clinic activities

Activity	Baseline Assessment (mins) Mean duration ±SD	Immediate post Intervention (mins) Mean duration ±SD	Test of significance	P value
From arrival to Dr consultation	(n=229) 137.6±70	(n=59) 88.7±45	t= 5.083	**0.000**
From arrival to exit	(n=97) 151.2±68	(n=54) 117.1±43	t=3.348	**0.001**
Registration	(n -=235) 2.2±6	(n=50) 1.4±1	t=0.784	0.434
Vital signs check	(n=220) 2.8±2	(n=55) 2.4±1	t=1.246	0.214
Dr consultation	(n=220) 8.6±12	(n=59) 9±12	t=0.281	0.779
Laboratory	(n=16) 28.4±30	(n=2) 12.5±4	t=0.734	0.473
Treatment room	(n=15) 22.9±60	(n=0)		
Pharmacy	(n=66) 4.5±4	(n=30) 3.9±3	t=0.819	0.415
Cash office	(n=18) 5.1±13	(n=11) 1.6±1	t=0.848	0.404
Eye clinic	(n=5) 8.2±2	(n=1) 5	t=1.281	0.269

Table III: Patient waiting time to see the doctor.

Time interval between arrival and consulting the Doctor	Baseline Assessment (N=248) Freq(%)	Immediate post Intervention (N=59) Freq(%)	Test of significance	P value
Less than 1 hour	38(15.3)	17(28.8)	x^2 =31.337	**0.000**
1hour to <2 hours	61(24.6)	28(47.5)	df = 4	
2hours to <3hours	57(23.0)	12(20.3)		
3 hours and above	73(29.4)	2(3.4)		
Time not fully filled	19(7.7)	0(0)		

The mean age of these respondents was 36 ± 14 years, and they generally had positive attitudes towards the services received, although about half (54.3%) felt improvements were needed as seen in Table V. Among clients who felt improvements were needed, over half of them (57.9%) identified provision of faster services as the needed improvement.

The mean estimated time duration between arrival at the facility and seeing the doctor from the clients' point of view was 109.6 minutes.

The most liked aspect of the facility (Table VI) was the environment within the facility (38.6%) and this was followed by a combination of the staff and environment (31.4%). About one third of clients identified long waiting time as the aspect they liked least about the facility (Table VII). However all clients interviewed said they would recommend the facility to their friends and relations.

None of the socio- demographic characteristics was

Table IV: Socio-demographic characteristics of clients who were interviewed (exit interviews).

Socio-demographic factors	Frequency (n=70)	Percentage (%)
Gender		
Male	14	20
Female	56	80
Ethnic group		
Yoruba	43	61.4
Igbo	13	18.6
Edo/Bini	6	8.6
Others	8	11.4
Religion		
Christian	58	82.9
Islam	12	17.1
Marital status		
Single	54	77.1
Married	16	22.9
Occupation		
Unskilled	16	22.9
Skilled	25	35.7
Professional	11	15.7
Student	12	17.1
Housewife	3	4.3
Clergy	3	4.3

Table V: Attitude of respondents to health services received.

Attitude to service	Frequency (n=70)	Percentage (%)
Felt time with Dr was adequate	68	97.1
Felt all his/her concerns were addressed	67	95.1
Felt staff were respectful	63	90.0
Felt services were affordable	63	90.0
Felt improvements were needed	38	54.3

Table VI : What clients like most about the facility.

Factors in facility	Frequency (n=70)	Percentage (%)
Affordable	2	2.9
Neat environment	27	38.6
Staff attitude	9	12.9
Organization	3	4.3
Staff and environment	22	31.4
Proximity of centre to client	3	4.3
No comments	4	5.7

Table VII: What clients like least about the facility

Factors in facility	Frequency (n=70)	Percentage (%)
Dirty environment	2	2.9
Staff attitude	4	5.7
Organization	1	1.4
Lack of drugs	2	2.9
Partiality shown to some clients	4	5.7
Long waiting time	23	32.9
No comments	34	48.6

associated with the clients' perception of services received at the facility.

DISCUSSION

Clients on the average at this PHC had to wait for about 137.6 minutes (which is over 2 hours) before seeing the doctor prior to the intervention of additional doctors from LASUTH. This is much longer than the recommended 30 minutes stated in the British Patients charter for waiting to see a doctor on appointment, and a major reason for this difference is that our patients are not on appointments but just walk in when services are required.[19] Our mean client waiting time of 137.6 minutes is also longer than previous findings in Sokoto, Sagamu, Lagos and Australia.[12-14,18] However, the studies in Sagamu and Lagos reported assessments of waiting time based on the patient's judgment, as opposed to the more objective assessment of the Sokoto study (which used stopwatches) and this study (which made use of both client flow analysis charts and patients assessment of how long they had waited). Based on our patients' judgement, their waiting time was an average of 109.6 minutes, which is less than the 131.1 minutes reported in the Sagamu study.[13]

When LASUTH doctors also started consulting (intervention), the waiting time was reduced to a mean of 88.7 minutes and it was statistically significant. This shows that increasing the number of doctors attending to the clients led to faster service delivery, although the reduction was not as much as that reported from a multi-

centre study conducted in Africa that was able to reduce waiting time from 130 minutes to less than 60 minutes.[23] But it shows the importance of having enough health care workers on ground to meet the health needs of the people. Only 15.3% of clients were seen by the doctor in less than 1 hour of their arrival at the facility in the baseline period, which increased to 28.8% once more doctors were added. Both proportions are less than the 31% reported in the study conducted in Sokoto.[12]

Notable also is the fact that about a third (29.4%) of clients in the baseline period had to wait for 3 hours or more before they could see the doctor unlike in the immediate post intervention period where only 3.4% of clients waited for 3 or more hours to be seen. Our study also revealed that those who were displeased with the health facility were mainly so on account of the long waiting time, and a larger share of those who felt improvements were needed thought the area of faster service was the item to work on, which is similar to findings in Kano where the greater proportion of dissatisfied clients were so on account of long waiting time.[16] These underscore the fact that more needs to be done to reduce client waiting time in health facilities and this will help to strengthen the PHC system. Also, more research is required in order to assess clients' perception of reasonable waiting time in our `environment.

This article has significance for public health as it focuses on reducing client waiting time which can help to improve clients' experiences in a Primary health care centre and therefore encourage patronage of the centre with the attendant improvement in access to health care and expected improvements in health status of the community. The results are also useful to aid policy makers and health managers in proper deployment of human health resources to improve service delivery and consequently public health.

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