

Ascertaining the Interplay Between Patients' Satisfaction of Health Care and the Type of HMOs Involved in their Health Services

EMELDA IFEANYI EMMANUEL, CHARLES ONI OKWUWA, JULIANA HUSSAINA DAUDA
Ibrahim Badamasi Babangida University, Lapai, Nigeria

Abstract. The main thrust of the study was to ascertain the interplay between patients' satisfaction of health care and the type of HMOs involved. Since patients concern themselves with the quality and affordability of health care, institutions as the HMOs have developed to manage these two variables. HMOs try to manage quality of health care and keep the cost of health services low. However, their cost control efforts have yielded some negative impacts on health care providers, patients, and government policy makers in some places. And this in turn, has resulted in poor patient's satisfaction in health services. The essence of this work therefore, was to investigate the impact of the activities of the HMOs on patient's satisfaction of health services. The study made use of the functionalist theory to explain the intended goal of the existence of the HMOs. It indicated that functionalism maintains that society must develop a system of medical care that would help prevent and maintain good health for people in society. Which, in turn, would lead to a healthy society. The study made use of the quantitative method to collect data from the respondents. It employed a two-phase sampling design; the simple random sampling technique and the stratified random sampling techniques. The simple random sampling technique was used to select five HMOs from the twenty-five HMOs covering two hundred and forty-four thousand, nine hundred and ninety-two NHIS lives in the FCT, while the stratified random sampling techniques was used to select the three hundred and eighty-four respondents working with eighteen public sector organizations in FCT, Abuja. This figure was broken down according to the five HMOs in the study. From the analysis, discussion and findings of this research, it was discovered that 31% of those using these five HMOs believed HMOs were working and functioning well in the NHIS to bring satisfaction to patients. Further still, in response

to another question, 75.5% of the respondents indicated that they had not experienced abrupt termination of hospital admission due to previous HMOs nonpayment of hospital bills. In essence, HMOs played a significant role on the impact of patients' satisfaction and the type of HMO involved in enrollee's health care needs.

Keywords: Health maintenance organizations, health care, health services, patient satisfaction

1. Introduction

Many patients concern themselves with the types of health care organizations, and the finance systems that provide health services for them principally due to the desire they have for quality, and affordability of health care. And Health Maintenance Organizations try to meet the needs and expectations of these people. HMOs gained expanded coverage, and grew rapidly within a short period from when they originated (Davidson and Moore, 1996). They gained great momentum in the 1990s, and 2000 (Cummings, 2002). They grew in their enrollment of enrollees (Christianson, 2014). And are designed in their most comprehensive form to meet the needs of people (Chapman and Harken, 2018). Their successes at enrolling a large number of people in need of their services in America, is partly because they provide good quality and affordable care to the enrollees. Other reasons why many people have joined Health Maintenance Organizations are because; (1) HMOs do more aggressive advertising than conventional or traditional insurance programs, (2) offer fringe benefits to employers patronizing particular HMOs, (3) allow patients retain their physicians, (4) are easily accessible, (5) provide comprehensive plans for patients, (6) are relatively lower in cost, and (7) enjoy government support. Further still, other

advantages attributed to the HMO system, are that; (8) patients who enroll with Health Maintenance Organizations visit the hospital less frequently than those with traditional health insurance plans, (9) have less deductions for surgery and hospital costs, (10) have their medical records kept in a central place for use by the physicians, (11) do not have to encounter the paperwork involved in their care, and (12) do not suffer the reimbursement delays experienced by others when non-health maintenance organization physicians file for insurance claims. The emphasis of health maintenance organizations on preventive rather than curative health care, has translated into more services with reference to check-ups, and other medical examinations (Davidson and Moore, 1996). The shift by many Americans to HMOs initially did have a positive impact on the cost of health care. It slowed down the increase in health cost. However, it gradually began to impede patients unlimited access to health services (Ryan and Murphy, 2005). It is argued that the actions of HMOs may be encouraged by the desire to make profits more than to provide quality health care for the enrollees. Their desire to control costs has created conflict between health providers, consumers and government policy makers. And these conflicts have led to serious negative impact on patient's health and satisfaction (Davidson and Moore, 1996). Attending to people's health needs at a lower cost and yet maintaining good quality health care, is an important goal that needs to be evaluated. This questions the fact, whether the HMO system of managed care is an effective and efficient means of providing care to the enrollees (Casey, Knott, & Moscovice, 2002). Health Maintenance Organizations provide their services through the following prepayment systems; fee for service, capitation and co-payment and can be identified by the following characteristics:

- They assume contractual responsibility for assuring the delivery of a stated range of health care services including at least in-patient hospitalization and ambulatory care services.
- They serve the voluntarily enrolled population.
- Premium is fixed, regardless of utilization.
- Co-payment (direct or indirect) may be fixed for use of certain services.
- They assume some of the financial risk or gain (Campbell, 2007).

Many models of HMOs exist in America such that it would be wrong to generalize on them. However, Rodwin (1989), indicated that the evidence based on a large number of stable HMOs in the 1960s and 1970s is persuasive in demonstrating that this form of health care financing and organization can reduce

hospital admissions by as much as 40 per cent when compared with conventional fee-for-service practice. While Olsen (1993), indicated that Health Maintenance Organizations do not have significant impact on a population's aggregate health in either the short-or-long-run. But will eventually decrease significantly, a population's health care costs. Thus, they may require a significant amount of time to control effectively physicians and patients' behavior to achieve reduction in cost. Health Maintenance Organizations are found to achieve savings in the long run and apparently do so with no significant decline in health.

2. Theoretical Framework

There are theories that can be used to explain types of health systems and access to care in Sociology. In this work, the functionalist theory was adopted to explain the phenomena under discourse.

2.1 Functionalist Perspectives of Health

Functionalists begin with an obvious point: if society is to function well, its people need to be healthy enough to perform their roles. This means that societies must set up ways to control sickness. One way they do this is to develop a system of medical care. Another way is to make rules that help keep too many people from "being sick" (Henslin, 2010). Functionalists see the growing importance of the institution of medicine in terms of three functions: the maintenance of health, research and the providing of innovative treatment, and social control.

Maintaining the health of the population, the central function of medicine, is obviously essential for any society. In The modern world, many individuals cannot provide all that they need to be healthy because they lack technical knowledge or adequate resources or both. The medical profession assumes the responsibility of keeping people healthy. It not only seeks to restore health to the ill through appropriate treatment but also to promote those activities that will prevent illness in the first place: good nutrition, good health practices, regular check-ups, and necessary public health measures.

Scientific medical research and innovative treatment are carried out by the medical profession. Research into illness and disease and the modes of treating them can only be carried out by those with medical knowledge. Medical and pharmaceutical research is carried out primarily in universities, university affiliated hospitals, and government and corporate laboratories. Recent developments in biotechnology

and genetic engineering have led to an increase in the number of specialized companies carrying out research in these fields.

The social control function of society often requires the participation of medical practitioners, who are frequently required to certify people’s health and thus their availability for certain duties ranging from factory work to military service. Physicians also certify the health of subscribers to health insurance programs and carry out the mandates of public health policy (Goodman, 1991). HMOs come in to play significant roles of ensuring that people are, and remain healthy in society.

3. Research Methodology

Essentially, the quantitative method was used in this study. A cross sectional survey design was used. The survey questionnaires were administered to NHIS beneficiaries registered with some selected and accredited HMOs in the Federal Capital Territory, Abuja to assess the knowledge of beneficiaries on the impact of HMOs on the administration of health care to enrollees, and the overall performance of the HMOs’ roles in the implementation of the NHIS.

The study population comprised of all the lives covered by NHIS in the FCT under the public sector, and all the HMOs covering lives on the behalf of NHIS in the FCT at the time of the study. The number of lives covered by the NHIS in the FCT were 244, 992 while the HMOs covering these lives on behalf of the NHIS in FCT were 25. The study’s target groups were the NHIS enrollees in the public sector in FCT, and the HMOs managing these lives. As at early 2011, the NHIS allocated the various public sector organizations in the FCT to 25 HMOs to manage enrollees. The NHIS lives that formed the population of study were distributed across the various ministries, agencies and parastatals in the

FCT. The allocation was done so that the payment of capitation for all the employees of such organization can be done through the HMO responsible for that organization. A list of NHIS enrollees managed by a given HMO is available with the NHIS Desk Officer in all the organizations. The selection of FCT for the study was purposive because it houses the administrative/operational headquarters of the NHIS, as well as the administrative head offices and/or operational base of all the HMOs covering NHIS public sector lives in the country. Thus, the FCT was best suited for the study.

Basically, the design was a two-stage sampling design. In the first stage, the HMOs were selected by simple random sampling with replacement. The simple random sampling proportionate to size was done to allow each HMO in the FCT have equal opportunity of being selected in the sample. Out of the 25 HMOs covering lives on behalf of the NHIS, 5 were selected for the study. These selected HMOs represent twenty percent (i.e. one-fifth) of the 25 HMOs covering NHIS lives in the FCT. The justification for sampling with replacement is to ensure that independent events are produced. Sampling with replacement allows repeated items to be sampled more than once. Table 1 below, indicates the list of HMOs selected with the corresponding enrollees selected proportionate to the size of the HMO. In the second stage, the respondents for the study were selected by systematic random sampling, a statistical method involving the selection of elements from an ordered sampling frame, and provides equal probability of selection to all units in the population. By implication, each respondent had equal chances of being selected in the sample for the survey. A total of 384 enrollees were selected in the second stage. However, since both simple random sampling and systematic sampling are probability sampling methods, it is hoped that the findings derived from this study can be generalized into the population.

Table 1: Distribution of the Simple Random Sample Proportionate to Size

HMO	No. of lives selected proportionate to size
Total Health Trust Ltd	127
HealthCare International Ltd	178
Maayoit HealthCare Ltd	15
Princeton Health Group	14
Managed HealthCare Services Ltd	50
Total	384

3.1 Method of Data Collection

In the survey, the instruments used for data collection was a semi structured questionnaire. The survey instrument was divided into sections with a section designed using summated differential scale (Likert scale). It was further subjected to face validity. Also, the reliability of the survey instrument was calculated using the Crombach Alpha statistics to ascertain whether there is internal consistency in the items/questions in the study instrument, to verify to what extent the instrument produced the same results or replicate consistent results if similar studies are carried out afterward using the same instrument. Further still, an item analysis was done to examine the items/questions in the questionnaire to ascertain the desirability of dropping, retaining or replacing any of them depending on the resulting Crombach Alpha coefficient of the said item/question if it was deleted. In addition to the above, difficult or inappropriate questions discovered from the response of the respondents/interviewees was deleted, replaced or rephrased.

3.2 Method of Data Analysis

The quantitative data obtained from the field was screened and cleaned up to avoid the distorting effects of outliers and spurious outcomes. The cleaned-up data was entered and analyzed using SPSS version 17.0.

4. Results

The survey results indicate that males were more 203 (52.9%) than the females 177 (46.1%). Responses from ages 26-45 were highest in the survey, this indicated that majority of the respondents were adults. The married respondents were 319 (83.1%) while the singles were 50 (13.0%) other i.e., those separated were 4 (1.0%), Divorced 1 (0.3%) and widowed 7 (1.8%) for educational qualification, 210 (54.7%) of the respondents had first degree, those with a diploma qualification were 81 (21.1%) while masters and PhDs were 52 (13.5%) and 2 (0.5%) respectively. The study discovered that majority of the respondents were highly educated and their responses could be relied upon in response to certain questions asked.

Objective: To ascertain the interplay between patients’ satisfaction to health care and the type of Health Maintenance Organization involved in their health services.

Table 2: Responses on How Satisfied They Were with Their HMOs by HMOs

How satisfied are you with your HMO?	Total Health Trust Ltd	HealthCare International Ltd	Maayoit HealthCare Ltd	Princeton Health Ltd	Managed HealthCare Services Ltd	Total
Very satisfied	11 8.7%	18 10.1%	3 20.0%	1 7.1%	5 10.0%	38 9.9%
Satisfied	42 33.1%	50 28.1%	7 46.7%	10 71.4%	13 26.0%	122 31.8%
Not very satisfied	23 18.1%	21 11.8%	3 20.0%	2 14.3%	8 16.0%	57 14.8%
Dissatisfied	9 7.1%	14 7.9%	0 .0%	1 7.1%	4 8.0%	28 7.3%
No response	42 33.1%	75 42.1%	2 13.3%	0 .0%	20 40.0%	139 36.2%
Total	127 100.0%	178 100.0%	15 100.0%	14 100.0%	50 100.0%	384 100.0

Table 2, indicates respondents’ expression of satisfaction and none satisfaction with their HMOs according to the HMOs under study. For Total Health Trust Ltd, those who were very satisfied, satisfied, not very satisfied and dissatisfied were 11 (8.7%), 42 (33.1%), 23 (18.1%) and 9 (7.1%) respectively, making 85 (67.0%) of the 127 (100.0%) respondents sampled under this HMO. 42 (33.1%) of the respondents did not indicate whether they were satisfied or not. For Healthcare International Ltd, 18 (10.1%), 50 (28.1%), 21 (11.8%) and 14 (7.9%) making a total of 103 (57.9%) said they were very satisfied, satisfied, not very satisfied and dissatisfied respectively. Those who did not indicate any answer to this question were 75 (42.1%) out of the 178 respondents who were sampled under this HMO. For Maayoit Healthcare Ltd, respondents who indicated options (1) very satisfied, (2) satisfied and (3) not very satisfied were 3 (20.0%), 7 (46.7%) and 3 (20.0%) respectively. 2 (13.3%) however did not indicate their level of satisfaction with their HMO. Under Princeton Health Ltd, 1 (7.1%), 10 (71.4%), 2 (14.3%) and 1 (7.1%)

indicated that they were (1) very satisfied, (2) satisfied, (3) not very satisfied and (4) dissatisfied respectively. Those who did not indicate their level of satisfaction were 2 (13.3%). The total number of respondents surveyed under this HMO was 14. Managed Healthcare Services Ltd, had 5 (10.0%), 13 (26.0%), 8(16.0%) and 4 (8.0%) respondents who were very satisfied, not very satisfied and dissatisfied respectively. 20 (40.0%) did not express their feeling of satisfaction or not. For Maayoit Healthcare Ltd, respondents who indicated the following responses: very satisfied, satisfied and not very satisfied were 3 (20.0%), 7 (46.7%) and 3 (20.0%) respectively. 2 (13.3%) however did not indicate their level of satisfaction with their HMOs. For Princeton Health Ltd, 1 (7.1%) 10 (71.4%), 2 (14.3%) and 1(7.1%) were very satisfied, satisfied and dissatisfied. Those who did not indicate their level of satisfaction were 2 (13.3%). the total number of respondents surveyed under this HMO was 14. Managed Healthcare services Ltd, had 5 (10.0%), 13 (26.0%), 8 (16.0%) and 4 (8.0%) respondents who said they were very satisfied, satisfied, not very satisfied and dissatisfied respectively. 20 (40.0%) did not express their levels of satisfaction or not with their HMOs.

Going by the percentages, Princeton Health Ltd had the majority of those satisfied with their HMO, followed by respondents under Maayoit Healthcare Ltd, then Total Health Trust Ltd, Healthcare International Ltd and Managed Healthcare Services Ltd. The general figures for the table above indicated that, 38 (9.9%) and 122 (31.8%) of the respondents said that they were very satisfied and just satisfied with their HMOs. While 57 (14.8%) were not very satisfied with their HMOs. The number of those who were dissatisfied with their HMOs was 28 (7.3%). While 139 (36.2%) did not indicated whether they were satisfied or not with their HMOs either because they didn't know the functions of HMOs or/and had not required their services before. In summary, those who knew their HMOs i.e., 31% of the respondents indicated that they were satisfied with their HMOs.

Table 3: Responses on Whether Their Hospital Had Ever Terminated Their Stay on Admission Due to HMOs Non-payment of Medical Bills by Each HMO

Has your hospital ever terminated your stay in hospital admission due to non-payment of medical bills?	Total Health Trust Ltd	Healthcare International Ltd	Maayoit HealthCare Ltd	Princeton Health Ltd	Managed HealthCare Services Ltd	Total
Yes	11 8.7%	9 5.1%	0 .0%	1 7.1%	3 6.0%	24 6.3%
No	96 75.6%	131 73.6%	13 86.7%	13 92.9%	37 74.0%	290 75.5%
No response	20 15.7%	38 21.3%	2 13.3%	0 .0%	10 20.0%	70 18.2%
Total	127 100.0%	178 100.0%	15 100.0%	14 100.0%	50 100.0%	384 100%

In table 3, responses on whether any hospital had ever terminated hospital admission due to HMO's non-payment of medical bills are indicated according to responses for the HMOs under study. For Total Health Trust Ltd, 11 (8.7%) of the respondents indicated that their hospital admission was terminated due to HMOs nonpayment of medical bills. 96 (75.6%) said this had not happened. And 20 (15.7%) did not provide response to this question. A total of 127 (100.0%) were sampled under this HMO. For Healthcare International Ltd, 9 (5.1%) said their hospital admission had been terminated due to HMOs nonpayment of medical bills. 131 (73.6%) said it had never happened and 38 (21.3%) did not respond to this question. For Maayoit Healthcare Ltd, none of the respondents indicated if their hospital admission had ever been terminated due HMOs non-payment of medical bills to the hospital. 13 (86.7%) said this had not happened to them and 2 (13.3%) did not respond to this question. A total of 15 respondents were surveyed under this HMO. For Princeton Health Ltd,

out of those who were surveyed, 1 (7.1%) said hospital admission had been terminated for him/her due to HMOs nonpayment of medical bill. 13 (92.9%) however said this had never happened. A total of 14 (100.0%) respondents were surveyed under this HMO. For Managed Health Care Services Ltd, 3 (6.0%) said their hospital admission were terminated due to HMOs non-payment of medical bills. While 37 (74.0%) said this had not happened. 10 (20.0%) did not provide their responses to this question.

Going by their percentages, Total Health Trust Ltd had the highest figure of 8.7% for those who said their stay in hospital admission had been termination, followed by Princeton Health Ltd with 7.1%, then Managed Healthcare Services Ltd had 6.0%, Healthcare International Ltd had 5.1% and none of the respondents Maayoit Healthcare Ltd indicated whether their stay in hospital admission had been terminated or not due to HMOs nonpayment of

medical bills. For those who indicated that this had never happened, Princeton had 92.9% response of those who indicated that termination of hospital admission had never happened to them. This was the highest figures in this case. Others were 86.7% for Maayoit Healthcare Ltd, 75.6% for Total Health Trust Ltd, 74.0% for Managed Healthcare Services Ltd, and 73.6% for Healthcare International Ltd.

The general responses in answer to the question on termination of hospital admission due to HMOs nonpayment of bills are presented as follows: 39 (10.2%) of the respondents said they had experienced termination of hospital admissions due to HMOs nonpayment of hospital bills. (18.2%) did not give their responses to this question. From the table above, 24 (6.3%) respondents said the hospital had terminated their stay on admission due to HMO's non-payment of medical bills, while 290 (75.5%) said they had not experienced such. This means that HMOs in most cases do pay for medical bills according to the NHIS guidelines. 70 (18.2%) of the respondents did not indicate any response to this question probably because they do not even know who Health Maintenance Organizations were. Although majority of the respondents had not experienced this scenario, if 24 (6.3%) however had indicated that they had experienced this, it means HMOs might be in the practice of not paying for patients' medical bills in order to make gains.

5. Conclusion

The main thrust of the study was to ascertain the interplay between patients' satisfaction of health care and the type of HMOs involved in their health services. The priority of patients has been on the quality of health care and the affordability of it. And efforts to manage these two variables has led to the establishment of the HMO system. HMOs try to manage quality of health care and the cost of health services at the same time. However, their desire to control costs has created conflict between health providers, consumers and government policy makers, which in turn has resulted in serious negative impact on patient's health and satisfaction (Davidson and Moore, 1996). The goal of trying to meet people's health needs at a lower cost and maintaining good quality health care at the same time, is an important goal that needs to be evaluated. The question of whether the HMO system of managed care is an effective and efficient means of providing care to the enrollees (Casey, Knott, & Moscovice, 2002), needs to be investigated. To explain this work, the functionalist theory was employed. Functionalists maintain that society must develop a system of

medical care that would help prevent and maintain good health for people in society. Which, in turn, would lead to a healthy society.

The study made use of the quantitative method to collect data from the respondents. It employed a two-phase sampling design, namely; the simple random sampling technique and the stratified random sampling techniques. The simple random sampling technique was used to select five HMOs from the twenty-five HMOs covering two hundred and forty-four thousand, nine hundred and ninety-two NHIS lives in the FCT, while the stratified random sampling techniques was used to select the respondents and captured data from a cross sectional survey. Responses were obtained from a total of three hundred and eighty-four respondents working with eighteen public sector organizations in FCT, Abuja. This figure was broken down according to the five HMOs in the study. The sample sizes for each HMO were as follows: Total Health Trust Ltd had a sample size of 127, Healthcare International Ltd had 178, Maayoit Healthcare Ltd had 15, Princeton Health Ltd had 14 and Managed Health care Services Ltd had 50 sample sizes. All 384 responses were obtained from 18 public sector organizations in the FCT, Abuja.

From the analysis, discussion and findings of this research, it was discovered that HMOs played a significant role on the impact of patients' satisfaction and the type of HMO involved in enrollee's health care. 31% of those using these five HMOs believed HMOs were working and functioning well in the NHIS to bring satisfaction to patients. Further still, in response to another question, 75.5% of the respondents indicated that they had not experienced abrupt termination of hospital admission due to previous HMOs nonpayment of hospital bills. On the overall, this showed that HMOs were performing effectively their tasks.

References

- Campbell, P.C. (2007). *Essentials of Health Management Planning and Policy*. Lagos, Nigeria: University of Lagos Press.
- Casey, M., Knott, A., & Moscovice, I. (2002). Medicare Minus Choice: The Impact of HMO withdrawals on rural medicare beneficiaries. *Health Affairs*, 21(3), 192-199. DOI 10.1377/hithaff.21.3.192. Retrieved from <http://content.healthaffairs.org/content/21/3/192.full>
- Chapman, J., and Harken, H. A., (2018). Can healthcare be reformed?

- <https://www.sciencedirect.com/topics/nursing-and-health-professions/health-maintenance-organization>
- Christianson, J. B., (2014). Managed care. Encyclopedia of Health Economics
<https://www.sciencedirect.com/topics/nursing-and-health-professions/health-maintenance-organization>
- Cummings, A. N. (2002). Encyclopedia of Psychotherapy.
<https://www.sciencedirect.com/topics/nursing-and-health-professions/health-maintenance-organization>
- Davidson, J. K., and Moore, N. B., (1996). Marriage and Family: change and continuity. Boston, United States, Allyn & Bacon
- Goodman, N. (1992). *Introduction to Sociology*. New York: HarperCollins Publishers, Inc.
- Henslin, J. M. (2010). *Sociology: a down-to-earth approach* (10th ed.). United States: Pearson.
- Olsen, R. N. (1993). The impact of health maintenance organizations on health and health care costs. *Applied Economics Academic Journal*, 25(11), 1451. Retrieved from <http://connection.ebscohost.co>
- Rodwin, G. V. (1989). Nine new ideas for health policy in France, Canada, and Britain. Retrieved from:
<http://www.nyu.edu/projects/rodwin/new.html>
- Ryan, G. G., and Murphy, P. b., (2005). Introduction to Primary care medicine.
<https://www.sciencedirect.com/topics/nursing-and-health-professions/health-maintenance-organization>