WEST AFRICAN JOURNAL OF MEDICINE

ORIGINAL ARTICLE

Financial Hardship in Settling Medical Bills among Households in a Semi-Urban Community in Northwest Nigeria

Difficultées Financières à Honorer les Frais Médicaux pour des Ménages dans une Communauté Semi Urbaine au Nord-est du Nigeria

M. N. Sambo*[†], S. H. Idris[†], S. S. Bashir[‡], J. B. Muhammad[†]

ABSTRACT

BACKGROUND: **An equitable health care system that responds to the needs of its people is important to break the cycle of poverty and ill-health. However, rising health care cost, and the preponderance of user fees to finance health care have often limited access to needed health services.**

STUDY DESIGN: **A cross-sectional descriptive study design was employed, using a pretested, semi-structured, interviewer-administered questionnaire.**

RESULTS: **The study was carried out among 188 respondents. Majority (88.2%) of the respondents were within the age-group 20-49 years, about two-thirds 63.8% were married and about half (42.8%) had family size between 5 and 9. The study revealed that about a quarter (26.1%) experienced hardship in settling their medical bills. While one-third (31.1%) had to sell their assets, about half (45.2%) had to secure loan while 16.6% had to resort to begging because of hardship encountered in settling the medical bills. Furthermore, of those who sold theirs asset; 46.2% sold their farmlands, 38.5% sold a piece of land, while 16.3% sold their vehicles.**

CONCLUSION: **This study has revealed that inhabitants of Samaru community experience hardship in settling their medical bills. Consequently, innovative strategies like deferment of payment and fee exemption, enrolling into community-based health insurance schemes as well as voluntary contributory health insurance schemes etc need to be considered, in order to alleviate the hardship in settling the medical bills. WAJM 2013; 32(1): 14–18.**

Keywords: **Financial, hardship, settling, medical bills.**

RÉSUMÉ

CONTEXTE: Un système de santé équitablerépondant aux besoins de ses populations est important pour rompre le cycle de la pauvreté et de la maladie. Toutefois, l'augmentation du coût des soins, et la prépondérence des recettes dans le financement du système de santé ont souvent limité l'accès àaux services soins nécessaires.

SCHÉMA D'ÉTUDE: Une étude descriptive transversale a été réalisée utilisant un questionnaire pré testé, semi structuré et administré par un intervieweur.

RÉSULTATS: L'étude a été conduite chez 188 personnes ayant répondu. La majorité de ces personnes (88,2%) étaient dans la catégorie d'âge 20-49 ans, environ les 2/3 (63.8%) étaient mariés et environ la moitié (42,8%) avait une famille de 5 à 9 membres. L'étude a montré que les chefs de famille étaient les principaux (80,9%) financiers des problèmes de santé dans les ménages, environ le quart (26,1%) avaient des difficultés à honorer leurs frais médicaux. Tandis que le tiers (31,1%) devait vendre ses biens, environ la moitié (45,2%) devait faire des prêts alors que 16,6% recouraient à la mendicité à cause de difficultés à honorer leurs factures. Parmi ceux qui avaient vendu leur bien, 46,2% avaient vendu leur champs, 38,5% avaient vendu une parcelle de terre tandis que 16,3% avaient vendu leur véhicule.

CONCLUSION: Il y'a un besoin d'amélioration des mécanismes de paiement et de l'équité dans la santé. L'absence de couverture financière de la santé a amené les pauvres, particulièrement les populations à faible statut socio économique et ceux du monde rural à subir les plus grosses charges liées aux frais de soins. Par conséquent, les décideurs politiques et les gestionnaires de programmes devraient mettre en place des mécanismes de réformes du financement de la santé afin de développer, d'implémenter et d'améliorer les mécanismes de protection contre les risques financiers. **WAJM 2013; 32(1): 14–18.**

Mots Clès: Financier, épreuve, réglement, factures médicales.

[†]**Departments of Community Medicine, Ahmadu Bello University, Zaria,** [‡]**Community Medicine, Ahmadu BelloUniversity Teaching Hospital, Zaria**

Correspondence: **Dr M. N. Sambo,** Department of Community Medicine, Ahmadu Bello University, Zaria. E-mail: sambonasir@yahoo.com

Abbreviations: ABU, Ahmadu BelloUniversity; **LGA,** Local Government Area; **SAP,** Structural Adjustment Programme; **SPSS,** Statistical Package for Social Sciences; **USD,** United States of America's Dollar; **WHO,** World Health Organization

INTRODUCTION

The economic development of any country is closely related to the health status of its population. As such, an efficient and equitable health care system that responds to the need of its people is an important instrument that can break the vicious circle of poverty and ill-health.[1]

The Nigerian Government had initially provided "free health care" for its citizens; as it was funded by its earnings from oil exports and general tax revenue. With the global slum in oil prices in 1980s, the government's major source of income was greatly affected; as such the government could no longer afford to provide free healthcare.[2,3] Consequently, there was introduction of several cost recovery mechanisms like user-charges, drug revolving fund etc.[3] Furthermore, the introduction of the Structural Adjustment Programme (SAP) in 1986 had adversely affected budgetary allocation to the health sector with resultant serious effect on health service delivery.[4] Interestingly a survey in 89 countries, covering 89% of world population, suggest that 150 million people, globally, suffer financial catastrophe annually because they pay forhealth services.[5]

While there is exponential growth in population and increased health care needs, healthcare financing in the face of dwindling income, rising cost and competing demands have remained a major problem for developing countries.[6] In an effort to tackle the many problems of inadequate healthcare financing, many options have been recommended. They include the introduction of user fees, social insurance and various forms of community financing.[7] While social insurance is being implemented at a low scale and only limited to the formal sector, there is limited access to available literature on the community financing in Nigeria. Evidences from the few existent community health insurance schemes reveal limited revenue raising capacity and a host of other challenges.[8] Consequently, households are left to bear the burden of health expenditure through payments at the point of service. This, in addition to the associated inequities of user fees exposes households to several options in order to access the needed service; often times limiting their access to needed services.[7,9,10]

The Nigerian National Health account revealed that households, more than other sectors, bear the greatest burden of health expenditures; as household expenditure accounted for 73.9% of the Total Health Expenditure (THE).[11] This is similar to ratios obtained in multi-country analysis in Africa. [4,12,13] It further revealed that Public spending per capita for health is less than USD 5 and can be as low as USD 2 in some parts of Nigeria; a far cry from USD 34 recommended by the World Health Organisation (WHO) for low income countries in the macroeconomic commission report.[11]

While a multi-country analysis has revealed that user-fee has denied access to health care to some, user fee has also led individuals to pay catastrophic proportions of their available income and consequently, pushed many households into poverty.[4,12,14] Therefore, it is imperative for policymakers to know who bears the burden of financing healthcare in Nigeria; how large is the burden relative to their means; and the consequence of bearing such financial burden? This will go a long way in designing policy and programmes that will promote financial protection and equity. In addition, the National health financing policy of 2006 further underscored the systematic inequities in healthcare financing; which has put groups of people who are already socially disadvantaged such as by virtue of being poor, social hierarchy etc, at further disadvantage with regard to their health. The policy attempted to address key challenges including investment and public spending and health, achieving universal coverage and strengthening social safety nets etc.[2,11] This was echoed by the WHO which stated that a distinct objective of any health system is equitable funding; which means that relative to their capacity to pay, the poor should not pay more than the rich i.e. the distribution should be progressive and relative to income.[13,15] This study was conducted with the aim of assessing the financial hardship encountered and the strategies employed by the inhabitants of Samaru community a semi-urban area in North western Nigeria.

METHODS

Study Design and Area

This was a cross-sectional descriptive study conducted in Samaru a semi urban community in Sabon Gari Local Government Area (LGA) of Kaduna State, Northwest Nigeria. Kaduna is the third most populous state in Nigeria, with a population of over seven (7) million people. Sabon Gari is among the most populous of the thirty-three LGAs in the state while Samaru community is one of the dense settlements in the LGA.

Prior to 1962 the inhabitants of Samaru community were mainly Hausa ethnic groups and were mostly peasant farmers, as well as Labourers and agricultural extension workers of the Institute of Agriculture. With the establishment of Ahmadu Bello University (ABU) Zaria in 1962, the population of Samaru became cosmopolitan, most of the inhabitants became wage earners and majority of them were employees of ABU Zaria. Furthermore, the village has a very good layout of houses along delineated streets with some overstretching of existing amenities.

Sampling and Data Collection

In estimating the sample size of the study, the probability score at 95% confidence interval with 5% precision level was used. The prevalence of financial hardship in paying medical bill was obtained from a pilot study we conducted, and was found to be 13%. This was then used to calculate the minimum sample size for the cross sectional descriptive study using the formular ($n= Z^2pq/d^2$), where $p = 0.13$ and $q = 0.87$.[16] A minimum sample size of 174 inhabitants was thus calculated. Witha provision for non-response rate of 10%, a total of 192 inhabitants were enlisted, but only 188 were fully interviewed in the study.

A multistage sampling was done. Ten streets were randomly selected from the list of all the streets in Samaru village, by balloting. On each street, the interviewer identified the first house using "bottle spinning" and started identifying the houses and then household; if there were more than a household per house; one was randomly

selected using balloting. In each household, only one respondent, the head of the household, was selected. From each house, the interviewer goes to the next house on the right, untila maximum of twenty houses have been identified on each selected street.A uniform set of an already pre-tested, semi-structured, interviewer-administered questionnaire was employed to obtain data from the respondents.

Data Management and Analysis

Of the 192 questionnaires administered only 188 were correctly completed and used for data entry and analysis; 4 were discarded. Data entry and analysis were done, under the supervision of an experienced statistician, using the computer software, SPSS Version 17.0. Data cleaning was conducted so as to take hold of data inconsistencies and other errors. Data analysis was carried out using descriptive statistics and cross-tabulations and findings were summarized in form of tables. Results were considered statistically significant if p-value were ≤ 0.05.

Ethical Clearance

The permission to conduct this study was sought and obtained from the Ethical and Scientific Committee of Ahmadu Bello University Teaching Hospital. Permission was also obtained from Sabon Gari LGA council. Furthermore, before a participant was involved in this study, the nature and objectives of the study were explained to him/her and a verbal consent was sought and obtained. Finally, each respondent was assured of the confidentiality of the information provided.

RESULTS

Socio-Demographic Characteristics of Respondents

More than four-fifths (88.2%) of the respondents were within the age group 20–49 years. Table 1 also shows that about two-thirds (63.3%) of respondents were male, another two-thirds (62.8%) were married. About a quarter (22.9%) were civil servants, another quarter (24.4%) were traders and one-sixth (17.6%) were farmers.

Table 1: Socio-Demographic Characteristics of the Respondents (n= 188)

Variables	Frequency	Per cent
Age (years)		
< 20	7	3.7
20 – 29	51	27.1
30 – 39	55	29.2
40 – 49	60	31.9
50 – 59	15	8.0
Sex		
Male	119	63.3
Female	69	36.7
Level of Education		
Tertiary	94	50
Secondary	56	30
Primary	18	9.5
Nil	20	10.5
Occupation		
Trading	46	24.4
Civil servant	43	22.9
Farming	33	17.6
Student	33	17.6
Unemployed	6	3.1
Others	27	14.4
Monthly Income (USD)		
0 – 6	5	2.7
7 – 70	90	47.8
71 – 340	74	39.4
341 – 1000	15	7.9
1001 – 1400	2	1.1
Nil response	2	1.1

Occurrence of Health Problem in Household and Source of Healthcare

Table 2 shows that majority (85.6%) of respondents had a member of their family that was sick in the six months preceding the survey, while the major source of healthcare sought, private hospital, was the responses of about a third (34.8%) of the respondents.

As many as 26.1% of the respondents revealed having difficulty in settling their medical bills in the six months preceding the study. Among those that had difficulty, about half (45.2%) had to secure loans while about a third (31.1%) had to sell their assets (Table 3).

Table 2: Healthcare Problems among Household in Last 6 Months and Sources of Health Care

Variable	Frequency	Per cent
Health problem in the last 6 months		
Yes	161	85.6
No	27	14.4
Source of Care		
Private clinics	56	34.8
PHC Facility	54	33.5
Self medication	26	16.1
Traditional healers	15	9.3
Others	10	6.2

Table 3: Hardship in Settling their Medical Bills among the Households and the Options Adopted in the Event of the Hardship

Variable	Frequency	Per cent
Hardship in settling bills		
Yes	42	26.1
No	119	73.9
Options for settling bills		
Secure loans	19	45.2
Sell assets	13	31.1
Begging	7	16.6
Did nothing	3	7.1

DISCUSSION

This study revealed a prevalence of hardship in settling medical bills, for illness that occurred in the six months preceding the study, of 26.1% among respondents. This finding is similar to that of a study in India, which documented a prevalence rate of household hardship financing all health event of 24.9%, 23.1% for outpatient care, but 38.6% among households experiencing a hospitalization.[17] As a result of the hardship encountered in settling the medical bills, the finding that 45.2%, 16.6% and 31.1% of respondents resort to securing loan, begging and selling their assets respectively, was similar to the findings from a study in Georgia which reported that 19% had to secure loan or sell personal items;[13] as well as findings of a study in south eastern Nigeria where a sizeable proportion of respondents borrowed money to pay their medical

bills, but sale of movable household asset or land was not commonly employed.[18]

Furthermore, the finding in this study that 7.1% of respondents did nothing to address their difficulty in settling their medical bills was akin to the finding of a study in northern Nigeria, that 16% of respondents were unable to afford the medications prescribed,[7] and as found by a multi-country analysis.[19] Similarly, a study in India revealed that 24.8% delayed seeking care and 6.8% ignored their illness.[17]

More still, this study has shown that households with hardship in settling medical bills were significantly (p value =0.001) less likely to seek healthcare in orthodox health facilities (Table 4). Thus,hardship in settling medical bill constitute a barrier to access needed healthcare for a huge proportion of Nigerians; just as the user-fees in government operated health facilities was reported to have denied access to needed service to the poorest people in Nigeria,[20] and across the African continent.[21] In addition, the triad of poverty, health service access and use, and the failure of social mechanisms to pool financial risk account for the mass variation across countries.[14,21] While some developing countries like Guatemala, Viet Nam, Nepal, Mexico, India and South Africa have adopted other pro-poor payment system such as waivers and exemption in response to the negative impact of user fees,[9] such could not be said about Nigeria. The study in south east Nigeria reported non-existence of fee exemption, subsidies and other coping mechanisms.[18]

Table 4: Relationship between Source of Healthcare and Hardship in Settling Medical Bill

Source of Health Care	Settled Medical Bill without Hardship	Settled Medical Bill with Hardship
Private Clinics	51	5
PHC Facility	43	11
Self Medication	10	16
Traditional Healers & Others	15	10
Total	**119**	**42**

¡² = 28.2 df = 3 p = 0.001

It is worth noting that health expenditure is said to be catastrophic if a household's financial contributions to the health system exceed 40% of income remaining after subsistent needs have been met.[2] However, catastrophic health expenditure is not always synonymous with high healthcare cost, except if the households have to bear the full cost of the service i.e. the service is not free, not subsidized or is not covered by third party insurance.[2] While catastrophic payment captures only the extent to which household face large financial shocks due to health payment, they may or may not push people into poverty. Fairly wealthy household sometimes incur catastrophic payment (a high proportion of non-subsistence expenditure on health), but are able to recover from them than poor household which might be pushed into poverty by even smaller health payments.[22]

The Federal government's recurrent health budget is on upward trend, however the bulk of the recurrent expenditure is on personnel.[11] While a study has found that public spending on healthcare affects the poor relative to non-poor and significantly affects the health status of the poor, relative to non-poor,[19] it has been reported that the poor socio-economic status quintiles and rural dwellers incurred more catastrophic health expenditure.[7]

Conclusion

In conclusion, this study has revealed that the inhabitants of Samaru community experienced hardship in settling their medical bills. As part of coping strategy, they go to the extent of securing loans and selling their assets, which poses a big challenge to financial risk protection. This therefore calls for development and implementation of innovative financing options that could help in alleviating the hardship experienced in settling medical bills by the members of the community. Financing options strategies such as deferment and exemption, enrolling into Voluntary contributory health insurance scheme, community based health insurance scheme.[21,23]

REFERENCES

1. Care-Net Limited. Health Insurance Report. Care-Net Limited, March 2003; **2:** 1
2. FederalRepublic of Nigeria. National health Care Financing Policy. *Federal Ministry of Health,* 2006: 1–42.
3. John CT, Akani CP, Ugboma HA. Financing health care delivery in Nigeria. The departmental Revolving fund scheme. *Nigeria Medical Journal* 2000; **38:** 20.
4. Mclntyre D, Golson L, Mutyambizi V. Promoting equitable health care financing in the African context. Current challenges and future prospects. General network for equity in health in Southern Africa (EQUINET) 2001 EQUINET discussion paper; **27:** 1–70.
5. Ranson MK. Reduction of catastrophic health care expenditures by a community-based health insurance schemes in Gujarat, India: current experiences and challenges. *Bulletin of the World Health Organisation* 2002; **80:** 613–621.
6. Anyaehia U, Nwobodo E. Administrative responsibilities of community-funded health insurance scheme in Nigeria. *Nigerian Medical Practitioner,* 2004; **45:** 26–28.
7. Sambo MN, Ejembi CL, Adamu YN. Out-of-pocket health expenditure of under-five illnesses in semi-urban community in Northern Nigeria. *Journal of Community Medicine and Primary Health Care* 2004; **16:** 29–32.
8. Osibogun A, Ojo K. Lessons from the field (editors). Health insurance schemes in Nigeria: lessons from the field. First ed. Nigeria: Com-Heal publishers 2006: 52–5.
9. Wagstaff A. Poverty and health sector inequalities. *Bulletin of World Health Organisation,* 2002; **80:** 97–105.
10. EzeanolueBC. Self-financing of government highest in Nigeria. Medical Memorandum. *Nigeria Medical Journal,* 1997; **32:** 64–6.
11. Soyibo A. National health account of Nigeria, 1998–2002. Final report submitted World health organisation Geneva by the Health policy training and research programme, Department of Economic University of Ibadan Nigeria, 2005; 1–30.
12. Xu K, Evans BD, Kawabata K, et al Household catastrophic health expenditure: a multi-country analysis. *The Lancet,* 2003; **362:** 111–117.
13. Katzin J, Cashin C, Jakoh M. Implementing health financing reform lessons from countries in transition.

Copenhagen: World health Organisation regional office for Europe, European observatory on health system and policies, 2010: 1–411.
14. Pearson M. Abolishing user fees in Africa? It depends…. Technical approach paper, December 2005; 1-8. Available from www.hlspinstitute.org accessed on 13th March 2011.
15. World Health Organisation. Evolution of recent changes in financing of Health services. Technical report series. Geneva: World Health Organisation, 1993.
16. Araoye, OM. Reserch methodology with statistics for health and social sciences. Ilorin: Nathadex publishers, 2004. p115–147.
17. Binnendjik E, Koren R, Dror DM. Hardship financing healthcare among rural poor in Orissa, India. *BMC Health Services Research*, 2012; **12:** 1–14.
18. Onwujekwe O. Uzochukwu BSC. Obikeze E. Investigating determinant of out-of-pocket spending and strategies for coping with payment for Health care in Southeast Nigeria. *BMC Health Services Research*, 2010; **10:** 1–10.
19. Amagghionyediwe LA. Government healthcare spending and the poor: evidence from Nigeria. *International Journal of Social Economics*, 2009; **36:** 220–236.
20. Akande TM, Ogunrinde EO, Health care financing among inpatients of Tertiary health facility in Ilorin Nigeria, *Journal of Clinical Practice*, 1999; **2:** 1–4.
21. Wuzewinski L, Families with catastrophic health care expenditure. Health Serv Res. 1986; (21): 617-34
22. Xu K. Catastrophic health expenditure. The Lancet; September 2003, 362(9388): 996-7
23. Bennet S, Creese A, Monash R. Health insurance schemes for people outside the formal sector employment. Geneva: World health organisation, 1998. Current concern. ARA Paper No. 16. Available at URL: http://whqlibdoc.who.int/hq/1998/WHO_ARA_CC_98.1.pdf.