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Research Article

Solidarity-based Financing of Health Care Access for the Poor Patients at the University Hospital Point G, Bamako, Mali

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Abstract

Introduction: Almost half of the world's populations do not have access to basic health care. This exclusion mainly affects people living in rural areas, who are nevertheless the most susceptible to diseases. The Medical Assistance Plan allows a marked improvement in access to healthcare by poor patients. It eliminates out of pocket healthcare cost, which normally prevents most of them from accessing health care. **Materials and methods:** This study was aimed to investigate the accessibility to healthcare for poor patients at the University Hospital Point G. We conducted a 12-month descriptive cross-sectional study from March 2018 to April 2019. Data entry and analysis were performed using SPSS version 21.0. **Results:** Our study participants we interviewed were aged 30-44 years old in 30.7%, female in 60.7%, and housewives in 46.7%. Our interviewees consulted for consulted for chronic diseases in 79.3%, had no monthly income in 78.7% and obtained the healthcare benefits at no cost to them in 60.7%. The prescriptions costed between 5,000 and 15,000 FCFA in 51.1%, 20252 FCFA on average with a standard deviation of 1340 FCFA. In sum, 59 out of our 150 patients who were eligible for free healthcare had to pay for a contribution either a subsidized cost in 84.7% or a partial purchase in in 15.3%. **Conclusion:** The main barriers to healthcare were the chronicity of their diseases and the expensiveness of the healthcare due the level of poverty in the country.

Keywords: Solidarity financing, Access to healthcare, poor, CHU Point G / Mali

INTRODUCTION

In Africa, access to healthcare services is still extremely limited by the existence of out-of-pocket costs affordable to few households. The issue of access has become a structuring dimension of the health debate. The complexity of the health situation reinforces the interest of the notion of access to reflect on the evolution of health systems and related-policies[1].

Access to healthcare is first considered from the point of view of financial barriers to the enjoyment of a certain number of health goods and services. Indeed, the development of health systems, particularly with a view to achieving universal coverage, must be based on efficient and equitable financing methods[2]. Many different mechanisms exist for collecting funding: taxes, contributions to compulsory, voluntary or private insurance, direct payment, donations, etc...[3].

However, mechanisms that take into account people's ability to pay for and remove barriers to allow access for poor patients are more inclusive than those that rely on uniform direct payment at the point of service[4]. Increasing equity requires expanding risk sharing, reducing catastrophic spending and subsidizing access to care for poor patients[5]. However, the choice of how to generate financial resources for the health system must be linked to the context and history of each country[6]. Internationally, many literature reviews exist now on health financing arrangements. Those concerning health systems in sub-Saharan Africa have recently been the subject of separate reviews, for example on national insurance[7], mutual health insurance, direct payment or exemption from payment[8].

In Mali, social security covers only a small number of risks for a small part of the total population. In 2002, the National Social Protection Policy was adopted with three strategic orientations: (i) the extension of the material and personal scope of social security (ii) the development of social assistance and action and (iii) the development of mutuality and other forms of solidarity-based organizations. The application of this policy led to the establishment of the Compulsory Health Insurance (AMO) and the Medical Assistance Scheme (RAMED) in 2009[9]. While the first scheme offers services to its members in return for a contribution, the second is a non-contributory public scheme that provides health coverage for the poor people without any contribution from them as long as they are known as indigents by the local

mayors. The mayor-provided certificate of indigence is valid for three years.

In Mali, as defined in its texts, RAMED is supposed to offer beneficiaries the possibility of free access to available healthcare in public health structures, but many concerns exist and remain. Out of 800,000 targeted people for implementation, i.e. 5% of the population, only 276,782 people were registered for RAMED and 58,541 were able to benefit from free medical services in hospitals and other health care structures across the country. We then hypothesized that not all poor patients eligible for free ANAM healthcare get access to it due to various barriers.

Based on this observation, we initiated this study to understand the obstacles to healthcare access for the poor patients at the University Hospital Point G in Bamako, Mali.

MATERIALS AND METHODS

Our study took place at the social service in the University Hospital Centre (UHC) of Point G. We conducted a 12-month descriptive cross-sectional study from March 2018 to April 2019. Our study population consisted of poor inpatients and outpatients with a receipt from the National Health Insurance Agency who we encountered in Point G during our survey. We obtained informed consent from each study participant before collecting data using our study questionnaire. With a confidence interval of 95%, a margin error of 5%, a population proportion of 50% by default and the total number of 245 poor people who contacted the social service at the University hospital of Point G in the year before our survey, we obtained a minimal sample size of 150.

We entered and analyzed the data using SPSS version 22.0. The results were presented in tables.

Ethical considerations:

Ethical and medical compliance were integral to this study which endeavored to comply with the following aspects: Consent of Point G UHC officials, Individual verbal informed consent of eligible patients at the time of the survey. Data were anonymized and kept in confidentiality. We sought and obtained voluntary participation from each study participant.

RESULTS

We obtained by estimation a study participation of 61.2% (150/245). Our study participants were female in 60.7% with a sex ratio of 0.64. The age group between [30-44] years old was the most represented with 30.7%. Our study participants were unschooled in 64.7%.

Our respondents were married in 56.7%, had at least one child in their care in 61.3%, were housewives in 46.7% and had no monthly income in 78.7% **(Table I).**

Table I: Socio-demographic data of our study participants at the University Hospital Point G, Bamako, Mali.

Sociodemographic Characteristics		Frequency (n=150)	Percentage
Marital status	Married	**85**	**56.7**
	Single	41	27.3
	Widowed	18	12.0
	Divorced	6	4.0
Number of children	None	**58**	**38.7**
	1 -3	35	23.3
	4-7	43	28.7
	> 7	14	9.3
Profession	Housewives	**70**	**46.7**
	Jobless	30	20.0
	Farmers/laborers	27	18.0
	Students	14	9.3
	Civil servants/retirees	5	3.3
	Traders	4	2.7
Income in FCFA	0 (No income)	**118**	**78.7**
	5000-45000	26	17.3
	50000-100000	4	2.7
	> 100000	2	1.3

Our study participants consulted the social service for chronic diseases in 79.3%, for medical care in 64%, for kidney diseases from the nephrology department in 26.7% **(Table II).**

Table II: Medical parameters of our study participants at the University hospital Point G, Bamako, Mali.

Medical Parameters		Frequency (n=150)	Percentage
Disease duration	Chronic (>6 months)	**119**	**79.3**
	Acute diseases (<2 weeks)	31	20.7
Diagnostics	Kidney diseases	**40**	**26.7**
	Cancers	36	24.0
	Sickle cell disease	18	12.0
	Psychological disorders	9	6.0
	High blood pressure	8	5.3
	Diabetes	5	3.3
	Epilepsy	3	2.0
	Others	31	20.7
Department of treatment	Nephrology	**40**	**26.7**
	Haematology/oncology	36	24.0
	Internal Medicine	29	19.3
	Paediatrics	15	10.0
	Surgeries (A and B)	8	5.3
	Gynaecology/obstetrics	4	2.7
	Others	18	12.0
Healthcare service requested	Medical care	**96**	**64.0**
	Dialysis/chemotherapy	24	16.0
	Lab testing, X-ray/medical imaging	18	12.0
	Consultation	7	4.7
	Hospitalization	5	3.3

Medical prescription for our study participants in the social service at the University Hospital Point G contained massive fluids in 32.6% during our survey **(Table III).**

Table III: Classes of drugs prescribed to our study participants.

Drug class	Frequency (n=150)	Percentage
Rehydratation (massive intravenous fluids)	**32**	**32,6**
Antalgesic/antiinflammatory drugs	24	24,5
Antihypertensive drugs	18	18,4
Antineoplastic drugs	15	15,3
Anti-microbial drugs	9	9,2
Total	**98**	**100**

Our study participants knew about ANAM through health workers in 48% (73/150), obtained free healthcare services in 60.7% (91/150). Out of 59 patients who had to pay for a contribution, 84.7% (50/59) paid for a subsidized cost or a partial purchase in 15.3% (9/59). The healthcare cost was between 5000-15000 FCFA in 51% and the average cost was 20,252 FCFA with a standard deviation of 1340 FCFA. Our study participants spent between 20,000 and 35,000 FCFA in 40% since being taken in charge by ANAM and the average expenditure was 2363 FCFA with a standard deviation of 1958. FCFA **(Table IV).**

Table IV: Sources of information of our patients about ANAM and healthcare services cost with/out ANAM.

Parameters		Frequency (n=150)	Percentage
Sources of information about ANAM#	Health workers	**73**	**48.0**
	Parents/Relatives	60	40.0
	Media	10	7.0
	Social workers	7	5.0
Free healthcare services	Yes	**91**	**60.7**
	No*	59	39.3
Healthcare cost in FCFA	[5000 15000]	**50**	**51**
	[20000 35000]	34	34,7
	[40000 55000]	11	11,2
	Plus de 60000	03	3,1
Patients' contribution to the healthcare services	[5000-15000]	27	18,0
	[20000-35000]	**60**	**40,0**
	[40000-55000]	17	11,3
	Plus de 60000	11	7,4

#*ANAM: Agence Nationale d'Assistance Medicale* or National Agency for Medical Assistance *when no free healthcare services was obtained, 6.8% (4/59) paid for the full cost, 84.7% (50/59) paid for a subsidized cost and 8.5% (4/50) surrendered because they could not afford even the subsidized cost.

Our study participants were satisfied with ANAM's healthcare services in 50 % (75/150). Those requesting consultations were 100% (150/150) satisfied as compared to those requesting a medical care with 62.5% (94/150). Those requesting examinations were not very satisfied in 61.1% (92/150) **(Table V).**

Table V: Satisfaction of our study participants about the ANAM's healthcare services.

	Consultation N (%)	Examination N (%)	Hospital-ization N (%)	Medicine N (%)	Medical care N (%)	Total n (%)
Not very satisfied	0 (0%)	11 (61.1%)	2 (40%)	44 (44.9%)	8 (33.3%)	65 (43.3%)
Satisfied	5 (100%)	7 (38.9%)	2 (40%)	46 (46.9%)	15 (62.5%)	75 (50%)
Very satisfied	0 (0%)	0 (0%)	1 (20%)	8 (8.2%)	1 (4.2%)	10 (6.7%)
Total	5 (100%)	18 (100%)	5 (100%)	98 (100%)	24 (100%)	150 (100%)

DISCUSSION

Socio-demographic profile

Sex: We obtained a sex ratio of 0.64, i.e. 60.7% of females **(Table I).** This result was similar to those found in MOROCCO in 2014 by HAJJId in "Evaluation of the medical assistance scheme at the prefectural hospital of Sale" and by MBARKI FATIMA ZAHRA in "Measure de la satisfaction des patients' beneficiaries du RAMED hospitalizes au CHR AL FARABI D'OUJDA VIS-VIS DU DIT REGIME" who had respectively 56% and 57.48% in favor of the female sex[10].

Age and marital status: The age group between [30-44] years old was the most represented in our study, i.e. 30.7%. The extremes ages were 5 months old and 86 years old. The mean age was 38.66 years old with a standard deviation of 15.97 **(Table I)**. Our results differed from that found by M.A HAJJI [11] in 2014 who has found 43% of over 60 years old.

This situation could be explained by the high representation of youths within the Malian population, which in addition to being confronted with numerous difficulties (lack of schooling, unemployment and lack of financial autonomy), is exposed to life events precipitating the onset of the disease and recurrences, in particular the consumption of alcohol, tobacco, drugs and hallucinogenic substances[12].

Educational level and occupation

Poor patients in 64.7% were unschooled as compared to 1.3% who had achieved a higher education level. This result is different from that of KEITA, Maimouna KANTE in 2015 on the "satisfaction survey of AMO insured persons in two reference health centers in the district of Bamako", where the secondary level was the most represented[10] and largely superior to that of MBARKI Fatima Zahra[10] in 2014, who has found that 34.25% of the respondents were illiterate.

In terms of employment, 46.7% of the poor patients were housewives and 20% were unemployed or jobless **(Table I)**. This predominance of housewives could be explained by the low level of education and economic status, which are the causes of the lack of information and the financial means necessary to afford healthcare. This result was lower than the 62% of unemployed found by M.A HAJJI[11] in 2014.

Regarding monthly income, 78.7% of the poor patients had no source of income **(Table I)**. Same finding made by MBARKI Fatima Zahraen 2014 who had reported 99% of patients with no fixed income[10]. The lack of income would be due to the lack

of work, which in turn would be due to the long duration of the disease, which prevents them from working in most conditions.

Services attended

During our study at the social service of the Point G University Hospital, the nephrology and hematology/oncology departments were the most frequented by poor patients **(Table II)**. This result differed from that of M.A HAJJI[11] in 2014 who reported 47% and 23% respectively in the surgery and medicine departments.

Reason for consultation: Among the reasons for consultation recorded, 79.3% were chronic illnesses **(Table II)**. M.A HAJJI in 2014 has reported in his study 72% acute illnesses[11]. This can be explained by the long duration of these chronic illnesses, which lead patients to find themselves in a situation of lack of financial means and end up resorting to the services of ANAM.

Pathologies

More than half of the poor patients suffer from kidney problems (26.7%) **(Table II)**.

This figure can be explained by the fact that kidney problems are chronic non-transmissible diseases. The management of such diseases is very expensive in the long run and could ruin the economy of the patient and his/her family. Such chronic diseases are not usually covered by health insurance, hence the need for the patient to look for other alternatives to support the cost of care. This result was lower than the one has found by Fatima Zahra MMBARKI[10] in 2014, who has found that 66% of these interviewees suffered from chronic end-stage renal failure.

This high rate can be explained by the high number of patients suffering from chronic illnesses who have been diagnosed and treated, but also by the high cost of medicines, which is still a barrier to access to healthcare.

Care offered by ANAM at the Point G University Hospital

Among the services covered by ANAM, medicines were the most requested with 65.4% **(Table II)**, which can be explained by the high number of patients suffering from chronic illnesses whose diagnosis had been made and therapy initiated, but also by the high cost of medicines, which is another barrier to access to healthcare.

Obstacles related to the care of the poor

The lack of media coverage of the ANAM scheme was one of the major obstacles to the care of the poor. Out of a total of 150 people, only 7% have had access to ANAM through the media **(Table IV)**. The others were made aware of it during their illness, either through relatives or through health workers (40% and 48% respectively). However, 91 poor patients interviewed during our study obtained the services free of charge. Among these 59 poor patients who did not get free healthcare, 84.7% bought the services partially, 6.8% bought them totally and 8.5% gave up care because of lack of means. M.A HAJJI[11] in 2014 had found that 48% of these interviewees resorted to buying some oral forms of medicines. These figures can be explained by the shortage of medicines, the lack of reagents, the non-availability of certain examinations in the agreed structures, and the fact that the ANAM does not take into account certain services.

Half of our respondents (50%) were satisfied with ANAM's services **(Table V)**. This result is lower than that of MBARKI Fatima Zahra[10] who has found that 66% of patients were satisfied with ANAM's services.

Limitations and difficulties of the study

During our study, we encountered some limitations and difficulties which were mainly summarized as lack of cooperation from some social service providers and refusal of some patients to participate into the survey. Nevertheless, we were able to reach our minimal sample size.

CONCLUSION

In sum, 59 out of our 150 patients who were eligible for free healthcare had to pay for a contribution either a subsidized cost in 84.7% (50/59) or a partial purchase in in 15.3% (9/59). The main barriers to healthcare were the chronicity of their diseases and the expensiveness of the healthcare due the level of poverty in the country.

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