Original Research Article

Impact of the Mutual Health Insurance on the Staff Medical Care of the University of Kisangani

Abstract:

SUMMARY

Introduction: The creation of the Mutual Health Insurance within the University of Kisangani is justified by the deterioration of the country's socio-economic situation, with unfortunate consequences for the sectors of life, with a view to improving the provision of medical care. To carry out this study successfully, we have set ourselves the following objectives: Check the evolution of the number of members of the mutual during the study period, identify the diseases that have required a lot of resources from the mutual during the four years of study, determine the professional category most assisted by the mutual's coverage and highlight the differences in the contribution of members by professional category.

Methodology: This is a retrospective descriptive study of the various cases of medical coverage of Kisangani University staff by the Mutual Health Insurance during the period 2014 to 2017. For this study, we worked with a comprehensive sample, i.e. the entire study population estimated at 1,432 adherent members, taking into account all their monthly contributions during the period 2014 to 2017. It was carried out thanks to the documentary analysis and the interview.

Results: The number of members of the mutual health insurance scheme was 1,311 in 2017, compared to 1,432 when it was created, i.e. a wastage rate of 8.44%. The Mutual Health Insurance of the University of Kisangani had produced 277,248,600 Congolese francs from membership fees. In addition, the professional category most assisted by the Mutual Health Insurance of the University of Kisangani is mainly composed of Administrative, Technical and Labour Staff with 1,217 cases out of a total of 1,432 expected members, or 84.9%.

Finally, malaria was the disease most commonly observed with recurrence during the period studied, with a total of 285 cases or 77.2%.

Keywords: Impact, Mutual Health Insurance, Medical Care, Staff, University.

1. INTRODUCTION

Despite medical progress, repeated reforms, inequalities in disease and access to care remain gaping between countries and within each nation. Many factors (environment, food, work...) play an important role in safeguarding health because being healthy is a universal need. But health systems and financing methods also have significant consequences. While some governments are discovering the virtues of the public, the private sector is deploying its tentacles and reconfigurations are being implemented everywhere.

The use of health services and access to care are becoming very limited or even impossible. From this situation, various sometimes perverse behaviors are emerging towards healthcare services, even public ones [10].

From America to Asia, from Africa to Europe, no country escapes the high winds of health system reform. On the face of it, there would be every reason to be pleased. In view of the still fallow needs and the pandemics still at work, the status quo would indeed be a tragedy.

While the United States, champions of the private sector or China, which has experienced it with the rigour of new converts, is trying to limit market logic to establish universal coverage; rich countries are setting as their main objective to reduce the role of the state and shared spending. At the very moment when the American model, which is the most complete example of it, proves its ineffectiveness, the market remains the compass even if we advocate here and there the return of the State [1].

The United States of America ranks second in the world for health expenditure (15.3% of gross domestic product in 2007) and 30th for "healthy" life expectancy (69 years). With such results, it is understandable that President Barack Obama wanted to take the issue head-on in an attempt to extend social protection to as many people as possible, even if the problems are not reduced to social security coverage. However, no one knows whether he will be able to keep his commitments and obtain the required majority [11].

The idea of social protection appeared in the 19th century, with the generalization of the industrial revolution and the emergence of large concentrations of workers. Through mutual aid societies, then their extension by social security systems with the objective of ensuring a healthy workforce, able to withstand the shock of harsh working conditions. They are all the more constrained as social struggles for the improvement of living conditions develop [7].

Thus, after the Second World War, various systems were created to guarantee the health of the population.

The increase in the cost of consultations, care and hospitalization considerably reduces the number of visitors to health centers, especially in developing countries where social security, or even mutual health insurance, provides almost no coverage. However, in the current global health context, all human societies, rich or poor, are more or less aware that health has a cost. WHO's stunning slogan "Health has no price, but has a cost" has crossed all continents. The "Poor", more than all populations of extreme poverty, are the victims who have to rely on solidarity, which guarantees the links of proximity, society or States [1].

In a country, generally speaking, any health policy must seek to ensure that the population has a "state of health" that can enable citizens to lead a socially and economically productive life. And we are used to say: "When health is fine, everything is fine". Indeed, health (or good health) is an essential dimension of sustainable human development (SHD). The search for good health is a daily human concern, especially in Africa and developing countries (DCs) where the observation of poor health is considered undeniable and accepted. This is an even heavier burden for the disadvantaged [3].

The reduction in subsidies following the disengagement of African states from the health sector has dealt a severe blow to the financing of medical procedures in most developing countries. The protection offered to employees in terms of health care is reduced or non-existent, despite the provisions contained in the legislative texts, because the mechanisms set up are essentially intended for benefits in kind offered by medical institutions currently suffering from chronic shortages of equipment and pharmaceutical products [4].

The economic, political and social context of the countries of sub-Saharan Africa has been characterized over the past decade by a constant deterioration. This precarious situation was caused by both internal and external causes. Internally, unfavorable political conditions, poor governance and a weak administrative and institutional framework, as well as the narrowness of

the internal market, have created an environment prejudicial to the development process of these countries in general, and of the Democratic Republic of Congo in particular [14].

For example, in our Country, the Democratic Republic of Congo, in recent years the quality of health care has declined significantly while its cost has only increased. The poor population is no longer able to take charge of themselves.

In addition, the State in general and the University of Kisangani (UNIKIS) in particular are no longer able to provide effective health care for its staff. The health challenges facing Kisangani University staff are enormous. That is why it seemed good for the members of the Kisangani University community to come together as a mutual health insurance company to support each other in improving medical care coverage. This is how the Mutual Health Insurance was created within the University of Kisangani. It includes the staff, i.e. the Academic and Scientific Staff (ASS) and the Administrative, Technical and Labour Staff (ATLS) of the University of Kisangani.

As a result, as part of this study, we decided to answer the following questions:

- How is the membership growth in terms of number of members during the period 2014-2017?
- What is the annual number of staff covered by this mutual health insurance company?
- Which diseases required a lot of resources during this study period?
- What is the most assisted professional category during the four years of study?
- What is the most common type of recurrent disease observed during the four years according to the archives?

To carry out this study successfully, we have set ourselves the following objectives:

- Check the evolution of the number of members of the Mutual during the study period;
- Identify the diseases that have required a lot of resources from the Mutual Health Insurance during the four years of study;
- Determine the professional category most assisted by the Mutual's coverage;
- Highlight the differences in membership fees by professional category.

As a result of the objectives assigned, we have made the following assumptions:

- The practice of double standards within the mutual health insurance scheme with regard to other members would be at the root of a slight change in terms of the number of members;
- One of the professional categories would be the most tax-intensive compared to the others and this would lead the organizers to apply the principle of double standards within the mutual at the time of takeover;
- The majority of diseases would have required a lot of resources and this would sometimes handicap the proper functioning of the said mutual;
- Administrative, Technical and Labour Staff (ATLS) would be the professional category most affected by medical care cases.

This study is of twofold interest: theoretically and practically. In theory, like any social problem, health is priceless. In approaching this study, we feel that we have made our small contribution to the research aimed at finding improvements. In practical terms, the solutions obtained at the end of this study will enable the managers of the Mutual Health Insurance of the University of Kisangani in particular and the members of the said insurance company in general to become aware, both with a view to improving the quality of medical care for patients on the one hand and, on the other hand, to encourage a spirit of mutual assistance and solidarity within the structure, but also to consider the mechanism for its sustainability.

2. MATERIALS AND METHODS

We have chosen the Mutual Health Insurance of the University of Kisangani as our field of research. It is a Mutualist Organization created within the University of Kisangani and which brings together the scientific staff as well as the Administrative, Technical and Labour Staff of this University establishment or institution. This Mutual Health Insurance is governed by several texts, in particular the statutes and the internal regulations.

2.1 Population

Our study population consisted of all agents of the University of Kisangani who are members of the Mutual Health Insurance and who actively participate in its operation through their monthly contributions. We have counted a total of 1432 members from 2014 to 2017.

2.2 Sample

For this study, we worked with a comprehensive sample, i.e. the entire study population estimated at 1432 adherent members, taking into account all their monthly contributions during the period 2014 to 2017.

2.3 Type of study

This study is descriptive of the retrospective type. As such, he is interested in the different cases of medical care of the staff of the University of Kisangani by the Mutual Health Insurance during the four years of study, i.e. from 2014 to 2017.

2.4 Data collection technique

The literature review, supported by the direct structured interview, was used to collect the data. The realization of this study is based on several axes: a data archiving review, the analysis of accounting documents such as the annual financial reports kept and prepared by the Mutual Health Insurance, the interview with the main actors involved in the functioning of the Mutual Health Insurance of the University of Kisangani, namely the personnel management, the social affairs management, the Administrator Manager of the University Clinics, the director of nursing as well as the director of student works although our research was specifically directed at the agents of the University of Kisangani (Academic and Scientific Staff as well as Administrative, Technical and Labour Staff).

On the basis of a survey protocol, we collected the data to collect the information useful for our research.

2.5 Data processing technique

On the basis of the frequencies of the observed data, it was obvious to make a simple percentage calculation based on the differences from one year to the next during the period 2014 to 2017, while looking at the initial number of adhering members, which is considered as the starting number in the calculation.

To do this, we used the following formula:

$$\textbf{P or \%} = \frac{NM}{INM} \textbf{ x 100}$$

Legend:

- P or % = Percentage;
- NM = Number of members of the year;
- INM = Initial number of members (Initial number of members);
- 100 = Constant.

2.6 Difficulties encountered

The carrying out of this study encountered various difficulties, in particular the unavailability of certain agents intended to provide us with useful information concerning the management of the Mutual Health Insurance of the University of Kisangani, and above all the interference from various bodies of the staff composing the said Mutual which did not facilitate our task despite the fact that an understanding was found after having gathered all the elements at our disposal.

3. RESULTS AND DISCUSSION

Through this study, we successively present the numbers of members from 2014 to 2017, the amounts of their annual contributions, the category of staff most affected and assisted by the Mutual Health Insurance, the disease having required a great deal of resources as well as the types of recurring diseases covered by medical care by the Mutual Health Insurance.

3.1 Number of members

Table 1: Distribution of members by year of change (N = 1,432)

Year	Number	Evolution (en %)
2014	1 386	-3.2
2015	1 355	-5.4
2016	1 341	-6.4
2017	1 311	-8.4

The results in this table show that out of a total membership of 1,432 members planned by the Mutual Health Insurance Company of the University of Kisangani, a decline is evident for the year 2017 with a membership of 1,311 or 8.4% less, followed by 2016 with 1,341 members or -6.4%; while the year 2015 records a decline of -5.4% for a membership of 1,355 and, finally, the year 2014 records a decline of -3.2% for a membership of 1,386. This results in an average wastage rate of 9.44%.

We have also noted that since 2014, the total number of members of the Mutual Health Insurance has decreased considerably. This situation is justified by the fact that, each year, the University of Kisangani, where the said mutual operates, suffers a relative loss of its agents due to the deaths, the dismissal of certain agents, but also and above all the multiple omissions of agents on pay lists; because the number of members of this Mutual is essentially composed of the different bodies of the staff of the University of Kisangani, paid by the public purse.

The approximate number of employees was determined on the basis of the annual contributions received. This size, estimated in 2013 at 1,853 members, shows that the Tax Workers' Mutual (TWM) does not encounter any difficulties for the affiliation of its members. However, it must be noted that despite the importance of this number, the degree of adherence of members to the spirit of mutuality remains very low [8].

According to the statutes of this mutual health insurance company, all adherent members must contribute to the functioning of the organization and this contribution is deducted at source, i.e. to the monthly salary. For an agent whose name does not appear on the payroll listing, it is practically impossible to pay his contribution to the mutual health insurance company, because according to the statutes, any member loses his legitimacy within the mutual health insurance company by not paying the monthly contributions. However, some members who feel capable, can pay their contributions despite the omission of their names on the payroll listing for their medical care.

The evolution of the number of members in a mutual health insurance company is based on the nature of the principle of a pre-established legal basis, whatever its form, whether it has a positive or negative impact on the number of members [13]. In this study, we noted a gradual decline in the number of members from one year to the next, justified by several cases of death of members, sometimes not immediately replaced. This regression would also be justified by the omissions of certain agents of the University of Kisangani from payroll listing, resulting in the temporary and/or permanent exclusion of unpaid members from the membership until the latter's salary situation is restored to normal. It should be noted that according to the statutes of the Mutual Health Insurance of the University of Kisangani, membership fees are always obtained when the payroll movement is signed by the withholding tax. The amount of the contribution was set independently of the member's will.

This shows an organizational weakness, unlike the Mutual Health Insurance for Primary, Secondary and Vocational Education Teachers, MESP, created by the Ministry in charge in the Democratic Republic of Congo. In addition to the statutes and internal regulations, this MESP is also governed by the Labour Code, which is a legal instrument recognized by the Congolese State. According to the texts governing this mutual, the member is informed in advance about all the conditions of membership of this mutual, whereas in the Mutual Health Insurance of the University of Kisangani, there are only the internal regulations and the statutes governing the members.

3.2 Subscribers' contributions

Table 2: Distribution of members' numbers according to their annual contributions expressed in Congolese Francs (CF)

Categories	2014			2015			2016			2017			Total
	Number	Amount	%	Number	Amount	%	Number	Amount	%	Number	Amount	%	
ATLS active	**636**	28,771,200	**45.7**	**622**	41,864,400	**53.6**	**616**	39,343,200	**52.4**	**602**	26,106,000	**42.7**	136,084,800
ATLS passive	**243**	5,470,200	**8.7**	**237**	6,894,000	**8.8**	**235**	6,562,800	**8.7**	**229**	5,185,200	**8.5**	24,112,200
ATLS annuitant	**35**	793,800	**1.3**	**34**	844,800	**1.1**	**33**	870,000	**1.16**	**33**	764,400	**1.2**	3,273,000
ATLS Restated	**21**	475,200	**0.8**	**20**	525,000	**0.7**	**20**	525,000	**0.7**	**20**	422,400	**0.7**	1,947,600
ASS active	**425**	26,481,600	**42.1**	**416**	27,093,000	**34.7**	**412**	26,841,600	**35.8**	**402**	27,787,200	**45.4**	108,202,800
ASS passive	**4**	129,600	**0.2**	**4**	148,800	**0.2**	**4**	148,800	**0.2**	**4**	129,600	**0.2**	556,800
ASS annuitant	**22**	799,200	**1.3**	**22**	762,000	**1.0**	**21**	736,800	**1.0**	**21**	772,800	**1.3**	3,070,800
Total	**1,386**	**62,920,800**	**100**	**1 355**	**78,132,000**	**100**	**1 341**	**75,028,200**	**100**	**1 311**	**61,167,600**	**100**	**277,248,600**

Referring to the data in this table, it should be noted that the Mutual Health Insurance of the University of Kisangani had produced 277,248,600 Congolese francs from membership fees during the entire study period. Administrative, Technical and Labour Staff (ATLS/active) are in first place in terms of contributions, with an annual amount of 136 084 800 Congolese francs, or 49.08% of the total annual amount of 277,248,600 Congolese francs, followed respectively by academic and scientific personnel (PAS/active) with 108,202,800 Congolese francs or 39.02% and Administrative, Technical and Labour Staff (ATLS/Passive) with 24,112,200 Congolese francs or 8.6%. Generally speaking, it should be noted that it is the active staff, all categories combined, who contribute considerably to replenish the fund of the Mutual Health Insurance of the University of Kisangani.

Health, or rather the right to adequate care, on time and by specialists, is something to which every sick person aspires. But, looking around us, in our health structures, especially hospitals, we are quickly struck by the lack of financial resources to access care. Here, the first reflex is to check the financial capacities of the patient (member) or his entourage.

The Mutual Health Insurance scheme is a non-profit-making association, based on the principles of solidarity and mutual aid between natural persons who freely and voluntarily join it. Its objective is to carry out provident actions in the field of health through members' contributions and for their benefit. The members define the objectives, organizational arrangements and activities of their mutual and participate in its operation. They pay contributions that are not related to their personal risk of falling ill. Thanks to contributions, the mutual guarantees its members the payment (or reimbursement) of all or part of the cost of their health care, care provided by providers with whom the mutual has, in most cases, signed agreements covering, inter alia, tariffs and quality of care.

In Ouagadougou, membership and contribution fees were deducted at source. Unlike most social mutuals, the Tax Workers' Mutual (TWM) therefore recovers all members' rights within the time limit despite its relatively large size. There is therefore a very good capacity to mobilize financial resources from 2009 to 2013, for a total amount of 199,992,000 CFA francs [8].

According to the WHO Report, it has been found that direct payments for health care are generally the most depressive form of financing and expose health service consumers to the risk of catastrophic expenditure. Thus, it recommends that States with problems of attendance at health facilities adopt the system of prepayment health financing. Many researchers have stated that membership of a mutual health insurance company would promote the use of health structures [6].

This is the case of Bayege I., in its study on the contribution of mutual health insurance to the population's access to health care, which states that "six years after the start of mutual health insurance in Byumba district, the use of health services has doubled from 21% in 1999 to 48% in 2003". The report of the Ministry of Health of Rwanda [5] further confirms that "the rational use rate of modern health institutions has increased more than fourfold. Thus, to solve the problem of under-utilization of the minimum package of activities, including late access to care, the Rwandan government recommends that every Rwandan citizen should subscribe to health insurance and thus, every mutualist member is able to attend its first contact health Center" [2].

In Rwanda, as part of resource mobilization, several sources of funding are all converging on support for mutual health insurance. We will mainly mention membership fees, which represent a large share of resources, government support and partner support. Mutualists contribute US$1.9 per individual per year. This contribution cannot be collected in instalments, but the political authorities assist the population in other ways that may enable it to mobilize this amount at one time, for example when a head of household has to pay for all the members of his or her household [12]. This one-time payment usually takes place in January and covers care for the whole year (January to December). A person who contributes in the middle of the year will only receive care from the time of his contribution until December 31st. In addition, a probationary period of 1 month must be respected before being able to access care if the member is a new one. The insured must always pay 10% of the total cost of care, which is the co-payment [9].

In 2009, Ramanana D. & O. Barthes, in a study on the health services procurement fund in Western Kasaï Province (DRC), manages to compare the health care financing system in Rwanda and DR Congo, in these terms: "Rwanda and DR Congo cannot be compared with regard to the use of health services because of the financing system based on mutual health insurance" [7].

3.3 Professional category most assisted by the Mutual Health Insurance

Table 3: Distribution of members by professional category most assisted by the Mutual Health Insurance

Category	Number of employees	%
Administrative, Technical and Labour Staff	1,217	84.9
Scientific Staff	145	10.1
Académic Staff	69	5.0
Total	**1,432**	**100**

In the light of this table, it appears that the professional category most assisted by the Mutual Health Insurance of the University of Kisangani during the four years of study is mainly composed of Administrative, Technical and Labour Staff (ATLS) with 1,217 cases out of a total of 1,432 planned members, or 84.9%, followed by scientific staff with 145 cases or 10.1% and finally Academic Staff with 69 cases, or 5.0%.

It should be noted overall that these are agents apparently taxed by the weight of age and exposed to any wave of pandemic and this would be the basis for several cases of care (assistance) for this professional category.

Anyone receiving medical care must pay, at least present a "Laboratory voucher". Facilities are granted to civil servants and to all those who present a certificate of payment from the employer. In principle, patients are responsible for the cost of medicines. Some patients prefer to use their relationships or the influence of a superior or a relative to avoid paying.

3.4 A highly resource-intensive disease

Table 4: Distribution of cases by diseases requiring a lot of resources in management

Yeat	Sickness	Amount in CF	%
2014	Arterial hypertension	17,155,600	21.0
2015	Diseases requiring surgery	25,272,000	31.0
2016	Malaria/typhoid fever	9,966,000	12.2
2017	HIV/Tuberculosis	29,253,600	35.8
Total		**81,607,200**	**100**

The observation of this table shows us that the medical coverage of the staff of the University of Kisangani during the entire study period amounted to 81,607,200 Congolese francs, or 29.43% of the total amount of contributions. The consumption of the resources available annually in the fund of the Mutual Health Insurance of the University of Kisangani was mainly oriented towards the medical care of HIV/AIDS/Tuberculosis patients for the year 2017 with 29,253,600 Congolese francs or 35.8%, followed respectively by diseases requiring surgery with 25,272,000 Congolese francs or 31.0% in 2015, high blood pressure with 17,155,600 Congolese francs or 21.0% in 2014 and malaria with typhoid fever which caused expenses of 9,966,000 Congolese francs or 12.2% in 2016.

Article 12 of the Mutual Health Insurance's internal regulations stipulates that outpatient care is covered exclusively by the Health Center; hospitalization, surgery, ophthalmological care (except for the purchase of glasses), maternity and acute chronic diseases are covered by the Mutual Health Insurance.

A study carried out in Ouagadougou indicates that expenditure on sickness benefits and allowances was on average less than 50% of total income. The share of these expenses in the 2009, 2010, 2011, and 2012 revenues was 41.05%; 56%; 46.71% and 39.96% respectively. The

Tax Workers' Mutual therefore allocates a large part of its income to the treatment of illnesses; on average, out of 100 CFAF received, 45 CFAF goes to the treatment of health care and allowances [8].

We can claim to conclude that the Mutual Health Insurance of the University of Kisangani has the necessary means to ensure the medical care of its members given that in the majority of cases, only 29.43% of the contributions were spent during the study period. This could enable this mutual to devote the surplus to extending its field of action, such as the medical care of its members for care abroad. Article 14 of the Internal Regulations of the Mutual Health Insurance underlines that the mutual covers generic drugs and routine paraclinical examinations; however, for specialty drugs and specialized paraclinical examinations, the mutual participates up to 50%.

3.5 Type of recurrent diseases

Table 5: Distribution of cases by type of recurrent disease from 2014 to 2017

Sickness	**Number of cases per year**				**Total**	**%**
	2014	**2015**	**2016**	**2017**		
Malaria	26	42	133	84	285	77.2
Typhoid fever	8	3	22	13	46	12.5
Arterial Hypertension	4	14	11	3	32	8.7
HIV/Tuberculosis	1	1	3	1	6	1.6
Total	**39**	**60**	**169**	**101**	**369**	**100**

In view of this table, we note that malaria was the disease most commonly observed with recurrence during the period studied with a total of 285 cases or 77.2% with a high proportion of 133 cases during the year 2016. Typhoid fever was observed in second place with a total of 46 cases or 12.5%, followed by hypertension with 32 cases or 8.7% and, finally, HIV/Tuberculosis association with 6 cases or 1.6%.

To improve the health status of state agents, it is necessary to adopt a government-backed approach to health. The nature of this support and the definition of priorities depend on the context of each country concerned. Priority must be given to increasing financial resources for health, both in country budgets and in external aid received. Countries also need to make a stronger commitment to improve their management and better focus their policies on the problem of poverty.

According to WHO, fundraising (financial contributions to the system must be sufficient and collected in an equitable and efficient manner); pooling of resources (contributions are pooled so that health costs are shared among all contributors and not just at the patient's expense); and purchasing (contributions are used to purchase or provide appropriate and effective benefits).

4. CONCLUSION

The creation of the Mutual Health Insurance Company within the University of Kisangani is justified following the deterioration of the country's socio-economic situation, which has had unfortunate consequences on the sectors of life and in order to support each other in order to improve the provision of medical care.

We found that the number of members of the Mutual Health Insurance did not remain stable during the study period. It was noted that the mutual is gradually losing its members, which could lead to a reduction in contributions, the main source of funding for the mutual.

After analysis, the following results were obtained:

- The number of members of the mutual health insurance scheme was 1,311 in 2017, compared with 1,432 when it was created, i.e. a wastage rate of 8.44%;
- The Mutual Health Insurance of the University of Kisangani had produced 277,248,600 Congolese francs from membership fees;
- The Administrative, Technical and Labour Staff (ATLS/active) had contributed more for the mutual health insurance with an annual amount of 136,084,800 Congolese francs, or 49.08%;
- Medical care for the staff of the University of Kisangani during the entire study period amounted to 81,607,200 Congolese francs, or 29.43% of the total amount of contributions;
- The professional category most assisted by the Mutual Health Insurance of the University of Kisangani is composed mainly of Administrative, Technical and Labour Staff with 1,217 cases out of a total of 1,432 expected members, or 84.9%;
- Malaria was the disease most commonly observed with recurrence during the period studied with a total of 285 cases or 77.2%.

In view of these results, we recommend that the Mutual Health Insurance of the University of Kisangani:

- to extend the scope of the Mutual Health Insurance by accepting the membership of other non-personal members of the University of Kisangani in order to be able to generate much higher revenues to ensure consistent medical care;
- to apply the monthly contribution in proportion to the monthly income of the members.

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