

PAYING FOR HEALTH CARE INSTEAD OF BUYING DRUGS. An experience from Western Mali

by

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Summary. — This paper gives an overview of what happened when a flat fee cost recovery system for pre-school children was introduced in a rural town hospital in western Mali : the preceding analysis, the implementation of the new scheme, the results and the problems. The most probable explanations for the problems are discussed. It is concluded that, in order to be successful and to attain its objectives, an initiative of this kind — in this environment — requires very careful preparation and commitment, management-wise as well as socially, in order to achieve a sufficient level of common understanding and consensus.

KEYWORDS: Health care financing; Cost recovery systems; Flat fees; Mali

The situation and its background

The setting is a town of approximately 20,000 inhabitants in western Mali, in a sparsely populated rural area. Modern medical care is provided by a small district hospital with outpatient department and, in a « parallel » way, by a Mission dispensary. Drugs can be purchased at the local sales outlet of the official, commercial, at the time nation-wide pharmaceutical distribution network (Pharmacie Populaire du Mali, P.P.M.). As a rule, only commercial brand name drugs are available (no generic name essential drugs), mostly imported and sold at prices comparable to (or higher than) retail prices in Western Europe. The general common practice for outpatients is to receive a prescription of drugs which they are supposed to buy at the local P.P.M. sales outlet, outside the hospital. Often the drugs are not available as prescribed.

The district hospital has instituted a cost-recovery system since two years; in-patients pay a fixed fee for each hospital admission period, which varies according to the wards : FCFA 10,000 for surgery, 5,000 for medical and paediatric wards and 1,000 for the maternity ward (not involving surgery). These fees cover full treatment for in-patients. At the Out-Patient-Department (OPD), all patients (except pre-school children) are charged a fee of FCFA 100 for each consultation, *not* including treatment. The objective of the system is to recover treatment cost (drugs and other medical supplies) for in-patients, administrative recurrent expenditures and « normal » maintenance costs, but no personnel costs.

At the Mission dispensary, which operates independently from the district hospital, each attender pays, as a rule, a fee of FCFA 100 and receives a

prescription of drugs to be purchased elsewhere. However, the nurse in charge of the Mission dispensary generally provides essential drug treatment for the first day, and sometimes a complete course of treatment if the necessary drugs are not available at the sales outlet of the Pharmacie Populaire and she happens to have the drugs at hand at the dispensary (this is possible because the Mission can count on an independent supply of drugs from foreign sources). Of course, most patients consider this to be an interesting financial arrangement.

Examination of the hospital records showed a very low hospital admission rate for pre-school children and a high and early mortality among hospitalised children. The hypothesis was formulated that one of the probable reasons for this situation was the existence of excessive financial barriers to health care use, — especially for small children — because of a combination of high drug prices and unpredictability of treatment cost for the patients. As a solution it was decided that for the children's OPD clinic treatment be provided by the clinic itself, using standardised diagnosis and treatment strategies, for a fixed fee of, initially, FCFA 300 (= FF 6.00 or roughly US\$ 1.00) per episode of illness. This amount was calculated on the basis of then current price lists of drugs, in their cheapest form and packaging, among which were a number of (cheap) essential drugs (these were, unfortunately, available for a short time only) and of a rough analysis of the distribution of illnesses in the pre-school age group seen at the clinic in the past. At that time, there were no financial barriers to attending the children's' clinic itself — even if the cost of the treatment that would be prescribed there was unknown to most patients (and unaffordable to many). In the new all-in fee system at the children's clinic, if the treatment required hospital admission, no extra cost would be charged. Possible financial losses due to this new system were to be balanced by the hospital's existing cost-recovery system for « adults », which, at that time, produced a systematic net gain.

The children's clinic's all-in fee system was started in the hospital in April 1987. After 5 months the Managing Board decided to raise the fee to FCFA 400. The analysis presented below was made after 12 months.

Sources of data

All data were obtained from routine recording systems in the hospital (in-patients and out-patient clinic) and the mission dispensary: logbooks in which name, age, residence, diagnosis and treatment were recorded, and the hospital's monthly financial management and drug supply reports. Before the all-in fee system was started at the children's clinic, care had been taken to obtain separate records and accounts in the hospital's bookkeeping.

Study objects

The following variables and characteristics were studied :

- volume of patients' attendance over time;
- age of patients;

- diagnoses;
- prescribed treatment;
- hospital admissions;
- treatment cost;
- volume of « parallel » service's use (mission dispensary).

Results

1. Weekly number of patients; April 1987 - March 1988

Before the fixed-fee system was introduced (April 1987), some 25 pre-school children were registered weekly in the hospital's OPD clinic; this number was suddenly raised to about 70 during the first 9 weeks of the new system. Starting from June 1987 weekly numbers became more irregular but maintained the same average, until September, at which point a sharp drop occurred to pre-system levels (fig. 1).

At this point it is useful to point out that over the 52 weeks under observation, the fixed-fee system has been functioning during 28 weeks in all. It was interrupted (for various reasons; see below) during 3 weeks in June 1987, during 4 weeks in August-September 1987 and was stopped entirely from December 1987 until the end of the observation period. These interrup-

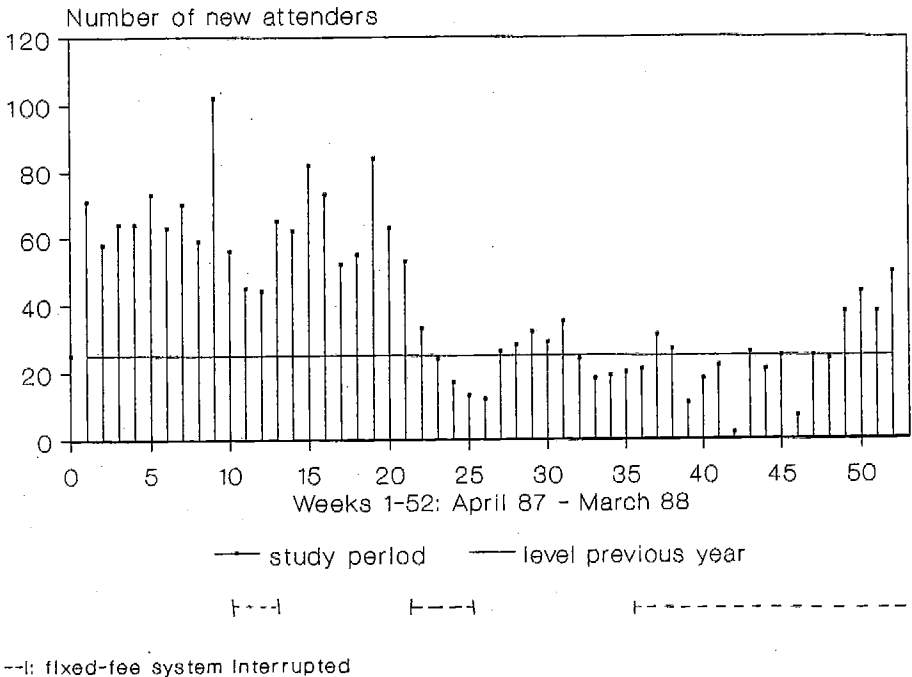


Figure 1
Weekly numbers of patients.

tions pertain to the children's clinic's outpatient care only; hospitalisation has never been affected. During the interruptions, children continued to be seen at the clinic, but treatment was prescribed to be purchased outside the hospital, like in older days.

2. Patients' age distribution

In the 0-6 years age group, approximately two thirds of the clinic attenders are less than 24 months old. For a total of 2,008 children of 'known' age, the mean can be estimated at 23 months and the median at 18 months. In Mali these ages correspond to weights of approximately 10 kg and 9 kg respectively. These weights can be used to better evaluate drug consumption at this clinic (to see if the instructions on diagnosis and treatment are carried out correctly). The age distribution is shown in fig. 2.

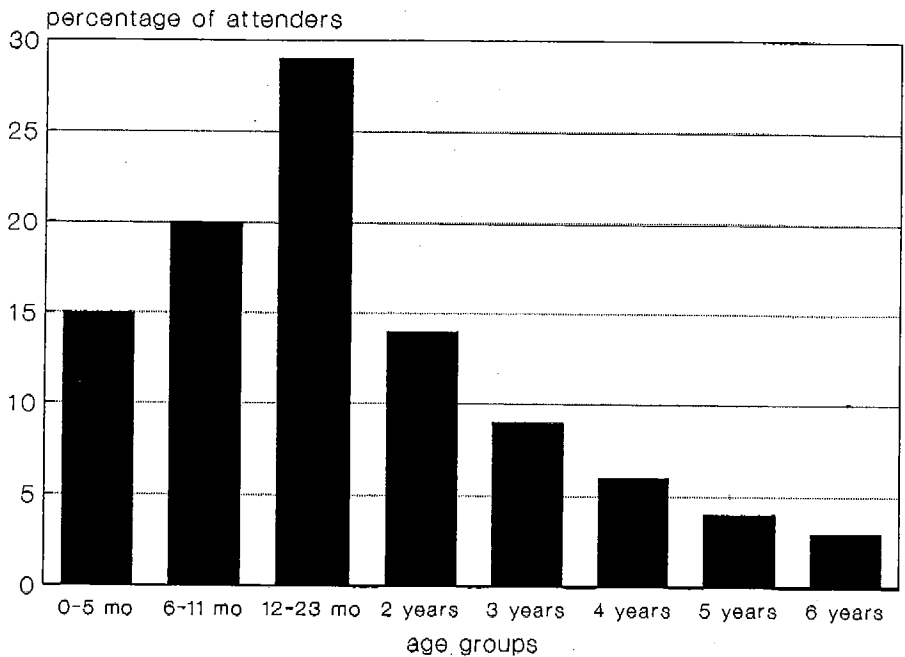


Figure 2
Age distribution of attenders.

3. Diagnoses

Over the period April 1987 through October 1987 1,484 children were recorded with 1,572 known diagnoses, i.e. on average 1.06 diagnoses per child.

Over the entire period, the group « fever » and/or « malaria » accounted for about 20 % of recorded illnesses. The group « diarrhoea - vomiting -

dysentery » represented about 19 % and respiratory infections some further 20 %

Dermatoses (of which more than 90 % were considered to be « septic », thus « justifying » prescription of antibiotics) added up to 17 % of recorded problems — again, over the entire period. Together the four groups mentioned above accounted for 76 % of all diagnoses, in rather equal proportions.

Monthly proportions are shown in fig. 3. It should be kept in mind that the figures presented above are averages over a period of 7 months. As can be seen in fig. 3, monthly fluctuations can be very important. Moreover, we can note an almost linear increase in the monthly proportions of (especially 'infected') dermatoses from 6 % to 31 % over 7 consecutive months. In this case assessment of the nurse's diagnostic skills and attitudes would seem to be called for, although some selection by the patients themselves cannot be excluded.

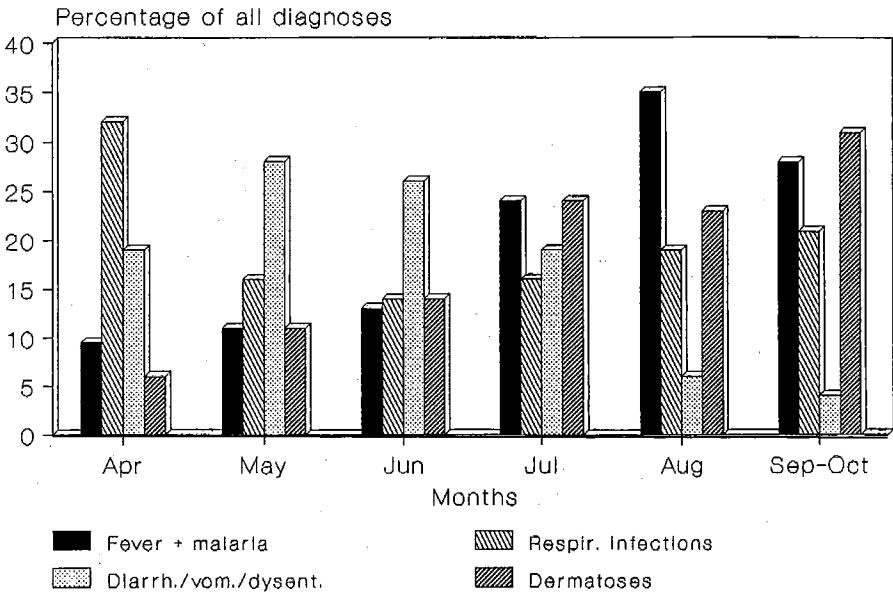


Figure 3
Frequencies of some diagnoses.

The group « diarrhoea - vomiting - dysentery » shows a downward trend over the 7 months, even when, traditionally, a peak was to be expected at the beginning of the rainy season (June, July, August). This may be explained by more widespread self treatment at home (oral rehydration), but this hypothetical explanation would need to be verified.

4. Drug prescription

We have examined 2,010 treatment entries in the record. For each month (April 1987 through March 1988) we have computed the proportion of prescriptions containing :

- systemic antibiotics (AB), excluding topical applications, as the sole essential component;
- parenteral quinine as the sole essential component;
- a combination of parenteral quinine and systemic antibiotics.

Results are shown in fig. 4.

Whereas the category AB represents a relatively stable proportion of about 50 % (fluctuating between 40 and 70 %), the same cannot be said of the categories « quinine » and « combination quinine + AB », where proportions evolve in a rising trend. In March 1988, 50 % of recorded children would have received parenteral quinine, whereas in April 1987 it would have been only 6 %.

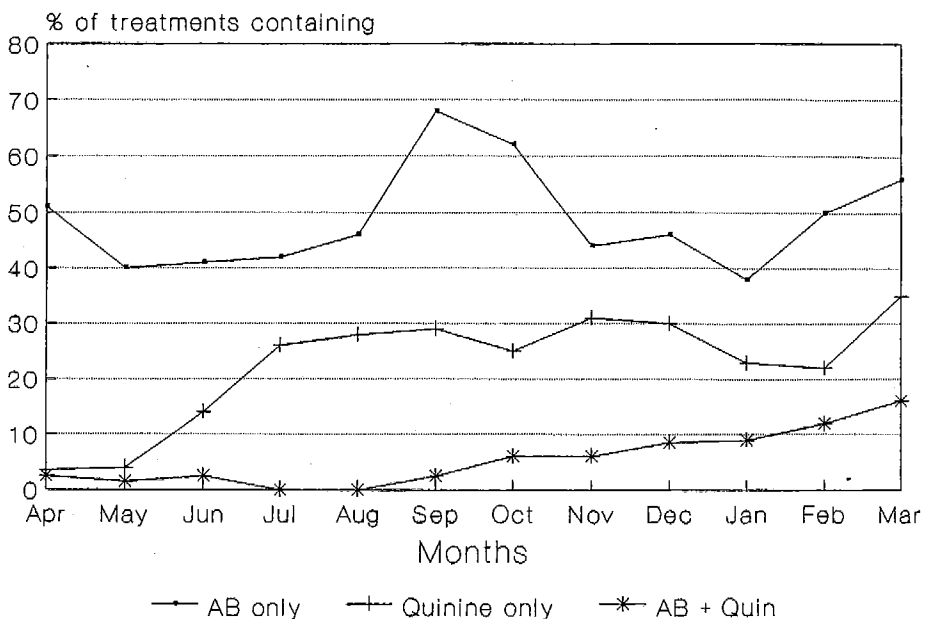


Figure 4
Drug prescription.

5. Hospital admissions

Over the 12 month period, 55 children of the 0-6 years age group were hospitalised; 14 of them (25 %) died in the hospital. In spite of the fact that during this entire period financial barriers to in-patient treatment of this age group had been significantly lowered (FCFA 300-400 instead of FCFA 5,000 for older patients), hospital admissions have not increased much. Fig. 5 shows the distribution over time.

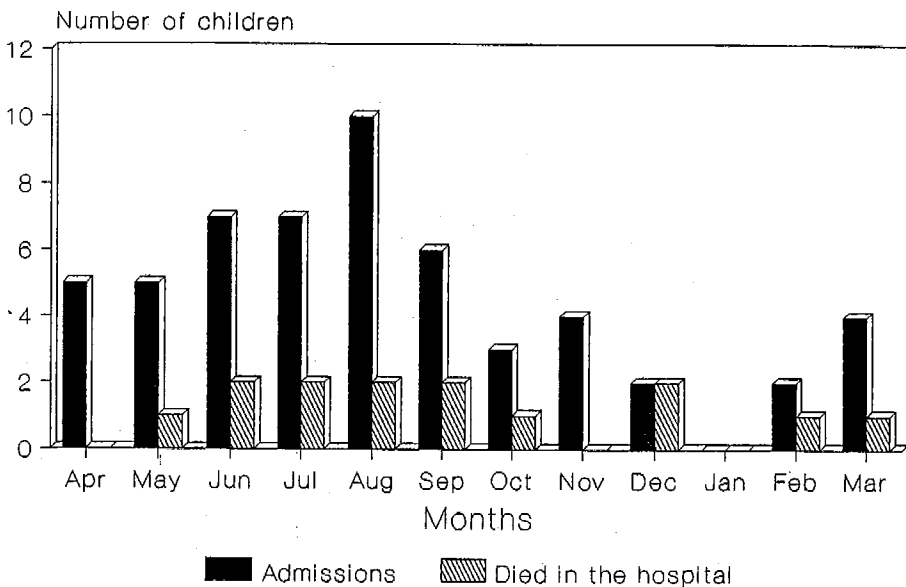


Figure 5
Hospital admissions and deaths among them.

6. Treatment cost

According to the information provided by the hospital's monthly management reports, the mean drug cost of children having paid the fixed fee is FCFA 643 (1,340 children from April through December 1987). The lowest monthly average was FCFA 438 per treatment (September 1987 - 87 children) and the highest was FCFA 1,158 per child (December 1987 - 29 children). Drug expenses for hospitalised children are included in these figures.

Over the entire period during which the fixed-fee system has functioned, a cumulative deficit of FCFA 419,918 has been incurred. This deficit was supposed to have been balanced by net gains produced in the other departments of the hospital's cost recovery system. For various reasons this has been only partly accomplished.

7. Parallel service's use (mission dispensary)

At the start of the hospital clinic's flat fee system, we note a considerable increase in the numbers of children at the clinic, but also a considerable decrease of their numbers at the Mission dispensary in the same town (April-May 1987; fig. 6).

Starting from June 1987 one can observe an almost immediate compensatory reaction to every malfunctioning or interruption of the clinic's flat fee system : when it is interrupted - or suspended - there is an immediate increase in the numbers of children at the Mission dispensary, compensating for the decrease at the hospital's clinic.

Whereas in the beginning (April-May-June 1987) the hospital clinic accounted for 60 % of all attending children, this proportion fell to 19 % in the period September 1987 through March 1988, while the total monthly average (clinic + Mission dispensary) increased from 440 in the former period to 543 in the latter.

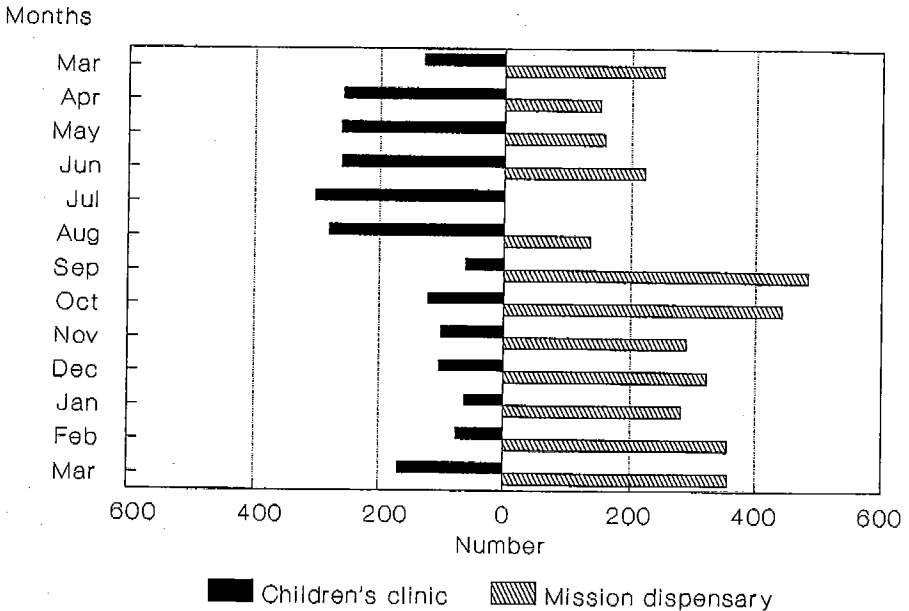


Figure 6

Attenders at parallel services.

Discussion

1. The problems

A first problem, easily identified, is the *lack of permanence* of the hospital clinic's service in the context of the new operational setting. In this setting permanence has to be guaranteed at two points : the consultation room and the drug dispensing room. Of these, the latter proved to be the most vulnerable, since in this particular clinic its activity depended entirely on the presence of the pharmacist. Most of the interruptions of the fixed-fee system that were observed were caused by the latter's absence (entirely legitimate, for that matter) and by the absence of any person judged to be sufficiently competent and reliable to replace him. Other interruptions were caused by the nonavailability of the nurse(s) at the consultation room for equally legitimate reasons (like training sessions, seminars, maternity leave, etc.) some of which are not always subject to district level programming and management.

A second problem is the *high cost of treatment* (for the hospital). For the purposes of this discussion, « cost » is limited to drug consumption, which forms, as a matter of fact, the greater part of « marginal expenses » occasioned by the system, management costs being very low.

These high treatment costs are, apparently, caused by two factors :

- the use of relatively expensive forms of drugs (syrups instead of tablets, injectables instead of oral forms), which was in this case more or less dictated by the circumstances (availability on the market);
- insufficient compliance by the prescribing agents with the instructions on diagnosis and treatment.

This latter factor can be rather easily assessed if we have a list of the quantities of dispensed drugs, the number of patients, their average weight and the number of times these drugs have been prescribed. Knowing what the instructions were on the indications and dosage of drugs, we can then compare, a posteriori, actual practice with theoretical instructions and arrive at some rough indicators of « prescriber compliance ».

Doing this exercise for anti malarial and AB treatments, we come up with the conclusion that every child at the OPD clinic would have received at least 1.66 anti malarial treatments and 62 % would have received antibiotic treatment, whereas the records show only 43 % of patients treated with AB during the 4 month period of this particular sample. In November 1987, one third of 104 children would have received 3 injections of quinine, whereas quinine does not feature in any instruction on ambulatory treatment, oral chloroquine was readily available and only 4 children were hospitalised.

How to explain this ? The clinic staff claim that a great deal of pressure is exercised by the patients on the prescriber's behaviour in these circumstances. Indeed, it is difficult to explain to a patient who has put down FCFA 300 (or 400) that the « rational » treatment of his problem consists of 3 tablets of chloroquine for a (generally known) total value of FCFA 21. The only advantage many patients could see in the all-in fee system is that expensive drugs could be obtained at a relatively low price. Thus the whole clinic's activity was being reduced to a cheap way of getting expensive drugs. The finding that in some months more people have paid the fee than were seen (recorded) in the clinic, fits in with this interpretation : it can be assumed that a proportion of patients only paid the fee to get some drugs they wanted, bypassing all controlled clinical interaction, thus making sure that they got « their money's worth ». This amounts in fact to a form of purely individual, illness by illness « insurance scheme », centred entirely on drug consumption, and of which all elements of inter-user solidarity are banned. In the insurance jargon, a nice blend of « moral hazard » (a tendency for increased risk — or consumption — by those who paid the « premium ») and « adverse selection » (only paying the « premium » in case of high risk).

One can hardly « blame » the patients for this; apparently the system was insufficiently prepared and its implications were not completely understood, neither by the staff, nor by the community as a whole, nor by the individual patients.

A third problem is the apparent « competition » between the hospital OPD clinic and the Mission dispensary, although this has never been intentional on either side.

The simplest explanation for the « migration » that has been observed, away from the Mission dispensary and later back toward it, is that attenders simply choose the place they consider to be the more advantageous (for the service rendered), but that the *total* number of attenders is not much affected by the availability of a supplementary structure where adequate treatment is provided at low cost. In other words, those people of whom it was suspected that they did not use the service for financial reasons, still didn't seem to do so (yet) after financial barriers had been modified. It is also quite possible, of course, that the 'financial barriers' are not the real issue at all.

2. Conclusion

It would seem clear that the staff in charge of the implementation and organisation of the all-in fee system underestimated its implications (in all fairness it should be added that it was not « their » idea, but a rather strong recommendation from their supervisors).

We have no evidence to support the conclusion that the first objective — to increase small children's access to primary and secondary curative care — has been met. The all-in fee was immediately « popular », but there is not much evidence that attenders were recruited from a subgroup of former non-attenders.

The second objective — to improve acquisition of prescribed treatment and (short term) continuity of care — is met automatically if and when the system works. But in order to produce better results such a system would seem to depend essentially on :

- an organisation that can guarantee a permanent functioning of the system;
- the existence and correct use of rational and standardised instructions on diagnosis and treatment; which depends on;
- adequate supervision (in practice a chapter all by its own);
- the continuous availability of the standard treatments chosen;
- adequate communication with and information of the public and thus a good understanding by all concerned;
- a conscious commitment on the part of health personnel toward the population they serve;
- an all-in fee that is low enough to be acceptable to individual customers in case of very low cost treatment; and at the same time;
- an acceptable financial balance (income/expenses) and therefore a fee that is high enough to cover the mean cost of treatment.

In short, the technical and « social » quality of the care provided should be good — or at least better.

Some of these conditions are not always under the management's control. Thus the availability of essential drugs, cheap enough to render low

all-in fees possible, is virtually a prerequisite for acceptability and for survival of the system in such a cost recovery context. However, most, if not all of the other conditions have to be met by the management and executive team at the operational level. A full understanding, by both personnel and potential clients, of the mechanism but also of the broader objectives of flat fee financing is mandatory. In fact, the entire concept of the health service and its relation to the community needs to be understood by all. This requires a form of communication that goes well beyond mere announcements made by the management team; high quality communication is needed to make it fully understood — by all — that drugs, although essential, are not the only worthwhile product of the health care delivery system, and a continuous dialogue is needed for all sides to understand and to take up their respective responsibilities.

The existence of « financial barriers » is not that single, simple, explanation for low utilisation and problems of compliance with prescribed treatment. Such an analysis is inadequate because grossly incomplete and therefore inaccurate.

The case presented here is not a beautifully conducted « experiment » — far from it. The reason why we still thought it worthwhile to recount it is that it illustrates some of the « shadier » aspects of reality that are often not talked about. It is about the daily reality of trying to change things in circumstances that are far from controlled or even understood : unreliable (and expensive) drug supplies, (very) low purchasing power, the inertia of what could be called the prevailing « health culture », conflicting personal interests, unshared (or insufficiently shared) values, de facto competing structures and what not.

A formal analysis based on some isolated, formally structural elements alone (like « financial barriers ») is not likely, in such circumstances, to yield immediately the most relevant solutions, even if these are known and accepted to be merely partial solutions. At best, such elements can be used as «levers» or as occasions (or themes) for dialogue with the community. This is where the real (and possibly lasting) change can be initiated.

Strange, far-fetched or little « scientific » as it may seem, the main lesson we can draw from this story is that improvement, in such a setting, is unlikely to be obtained if the decision for change has not been completely understood, matured and taken by the community itself. This implies in the first place patience and the willingness to accept that one can be proven wrong, accepting the necessity to talk and possibly negotiate for a long time with all the actors concerned, to accept the pace and rhythm of these complex procedures, and not to translate ideas into decisions and decisions into action before an acceptable level of common understanding and consensus has been reached.

Payer pour des soins de santé au lieu d'acheter des médicaments. Une expérience du Mali.

Résumé. — Cet article présente ce qui s'est passé quand un système de recouvrement des coûts, basé sur le principe du taux forfaitaire unique, a été introduit pour des enfants d'âge pré-scolaire dans un hôpital rural situé dans une petite ville au Mali : l'analyse de la situation antérieure, l'exécution, les résultats et les problèmes. Les explications plus probables des problèmes rencontrés sont discutées. La conclusion semble être que, si on veut faire réussir une initiative de ce genre — dans cet environnement — il faut une préparation soigneuse et un engagement sérieux, aussi bien au niveau de la gestion que socialement, afin d'arriver d'abord à un niveau suffisant de compréhension commune et de consensus.

Betalen voor gezondheidszorg in plaats van geneesmiddelen kopen. Een ervaring uit Mali.

Samenvatting. — Dit artikel wil een overzicht geven van wat er gebeurde toen een betalings-systeem met een vast eenmalig bedrag werd ingevoerd voor kleine kinderen in het hospitaal van een landelijke stad in Mali : analyse van de voorafgaandelijke situatie, uitvoering, resultaten en problemen. De meest plausibele uitleg voor de problemen wordt besproken. Het besluit is dat, als men dergelijke initiatieven wil laten slagen – in dit soort omgeving – een zorgvuldige voorbereiding en een ernstig engagement nodig zijn, zowel op het vlak van het beheer als van de sociale context, teneinde eerst voldoende gemeenschappelijk begrip en consensus te bekomen.

Received for publication on February 15, 1994.