Feasibility and desirability of prepayments and in-kind payments for health care in a poor country: social illusion versus economic reality

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Abstract : Prepayment and in-kind payments are highly proposed as essential mechanisms that can relieve the poor who are willing to contribute to the recovery of the costs of health-care services but are not able to pay cash directly at the counter. This idea is based on the experience that in poor countries like Tanzania, there is a proportion of the community who could find it easier to pay for health care before they get ill (prepayment) than doing so once they face illness. It is also concerned that, there are people who find it difficult to access cash to pay for health care while they would have been able to pay had they been allowed to dispose off some kinds of materials or provide other services other than money in cash terms in exchange for health-care services. Nevertheless, there is limited literature and analysis regarding the feasibility and practicality of such (especially in-kind) forms of payments in developing countries that are striving to introduce market principles in their health-care delivery systems. This paper provides a critical analysis regarding the theoretical desirability and actual limitations to the acceptability and practicality of both prepayment and in-kind payments in the formal health-care system of a developing country.

Introduction

For many years, the health sector of post-colonial states that are the present day 'developing countries', have heavily been supported by aid from foreign (bilateral and multi-lateral agencies) supplemented by limited revenues from government's tax collections. Throughout the period shortly after independence up to the mid 1980s, many developing countries adopted a system of provision of health care services free of charge to all populations. The system was not sustainable due to scarce resources (World Development Report, 1993). While several other strategies such as compulsory health insurance and user charges have been established in the formal health care service system in order to increase the financing base of the health sector, debates have been underway regarding the desirability of other quasi-insurance mechanisms such as the community health fund (CHF) scheme and in-kind payment mechanisms. A great interest has been on improving efficiency in the delivery of health services and ensuring coverage to all populations.

Advocacy for health-care prepayment and in-kind payment mechanisms is based on the view that, direct payment of user charges at the point of patient treatment has a deterrent impact on the demand for- and utilization of- health care services of the poorer population sub-groups (Abel-Smith & Rawal, 1992; Creese 1990; Leighton, 1995; Mubyazi, 1998; TDR, 1997). Other authors have observed that user fees accompanied by improvements in the quality of care results in a general increase in utilization of health-care (Gilson, 1997, Willis & Leighton, 1995). The extent to which direct out-of-pocket payment of user charges has been able to improve both efficiency and coverage of health care services without denying the poor access to such services, is still controversial (Gilson, 1997). On the other hand, there is little evidence to justify the desirability and practicality of prepayment and in-kind payment mechanisms in developing countries' health-care delivery systems. This concept paper gives a critical economic overview of the strengths and weaknesses in the arguments presented by proponents of these latter two payment mechanisms with reference to a developing country like Tanzania.

Theoretical desirability of prepayments

In 1988 UNICEF through the Bamako Initiative strongly advocated for health insurance and other forms of community supported health financing mechanisms in developing countries. The reason behind this thinking was that, communities in low income countries would have security or assurance of accessing medical care if they had paid in advance for such services instead of waiting until they urgently need them. This is because some of them (particularly the poorest) would unlikely being able to afford out of payment when ill. Thus, prepayment schemes if instituted are envisaged to allow the population to

insure themselves against unforeseen future health risks/illnesses due to disease or injury (Ensor & San, 1996; Gilson & Mills, 1995; Green, 1992; Hunson & McPake, 1993). The commonest system of community-based prepayment system today in most developing countries is the CHF. In Tanzania, CHF was first piloted in Igunga District since 1996 with the view to establishing it in the district and in other districts throughout the country (MoH, 1997).

Another official form of prepayment scheme, that is compulsory, is the national health insurance fund (NHIF), which is referred to as a 'social security scheme' in other countries. Under this scheme, formal employees such as civil servants, are required to pay a certain percentage of their salaries to the scheme, while their employers also contribute the same amount or slightly less or more to the scheme for each of their employees (Shaw & Ainsworth, 1996).

Primarily, both the CHF and the compulsory NHIF schemes have similar objectives of prepayment against future health needs. This is important because future personal or household monetary incomes may not be reliable or predictable due to unreliability of weather conditions or catastrophic illness or injury. The main difference between them is the degree to which risk is pooled and the mode of joining the scheme in question. It is only under a compulsory health insurance scheme that members (who are formal sector employees) have no choice of joining or not joining. Conversely, household membership to the CHF is arrived at on a voluntary basis and the door is also open for those who may feel like terminating their membership voluntarily. Another difference lies in the enrolment of the target populations, whereby most members of CHF are non-civil servants, although civil servants are not prohibited to join. Voluntary insurance scheme or quasi-insurance schemes such as CHF require both healthy and unhealthy population sub-groups to contribute to the fund. This is to avoid adverse selection. However, there is always the risk of a situation arising whereby most of those who decide to join the scheme are those with greater exposure to health risks.

The methodological approach often taken to attract community members to join prepayment schemes is through sensitization of the community. Through this the benefits they would get should they decide to join the scheme are explained. In the course of sensitization, the community is made aware of a possibility that they or their family members may be in urgent need for the health-care service but may not be able to access services. In addition, the community is promised of better quality and timely care in case they decide to join the prepayment scheme. The elements of the quality of care are defined so that the community gets to know the type of care they deserve under such a payment system. The key elements of quality health care suggested by communities include the availability of essential drugs, laboratory services, good health provider-client interaction, short waiting time for medical consultation and treatment as well as availability and accessibility of referral facilities. The question is whether the promise has ever turned into a reality to meet the expectations of targeted populations.

Conceptual desirability of in-kind payment mechanisms

There is a view that in some situations people may find it difficult to pay for health-care. However, many would be willing to contribute something they might have towards recovering the cost of the delivery of such services. In-kind materials meant here include assets or items possessed by a person or their families that can be disposed of in exchange for health services. Communities have been suggesting, and even actually paying in some situations, various things including crops, animals, and other household belongings like bicycles, radios, etc. as materials that can be disposed off by people who have desire to do so after failing to pay directly with cash. It is a fact that some health-care providers such as those at mission health facilities and traditional healers have been accepting some sort of in-kind payments to recover part/full costs of health services delivered to some of their clients. Even at community level in-kind payments have been in practice evidenced by the mobilization of charity contributions at times of crisis following for example, death of a community member or during events of marriage or related social occasions.

Voluntary organization's health care providers are reported to have been able to mobilize contributions in form of casual labour or acceptance of agricultural products from their clients who ask to pay in-kind than to pay in cash terms (Mujinja & Hausmann, 1997). This contribution is done after either the respective patients have been provided with the services and have recovered from their illnesses, or by the relatives of the patients at the time the patients are getting the services. However, there is limited evidence on the

extent to which this mechanism of payment has been accepted on a wide scale in various developing countries. Tanzania faces this challenge because there are practical limitations in formalizing this payment mechanism in the national health system.

Critical overview of the two payment mechanisms

Whether communities are willing to join a payment system or not would depend on the following, among other factors:

- rate of payment an individual person or household are required to make
- benefit package e.g. type and quantity or level of services per individual member
- individual or community perceptions of (or confidence in) the payment system
- individual's willingness to pay
- individual's ability to pay, as opposed to those willing but not able to pay
- easiness of the payment system e.g. cash may be preferred because of easier carriage/handling

The importance of prepayment has always been emphasized to the poor population groups. Whether the payment system is by cash or in-kind, proponents of community based financing mechanisms argue that, mobilization of health care payments in developing countries could be more successful if it were undertaken at times during which communities have money, for example, at the end of the month (for those who are employed on salary terms) or during if not immediately after the harvest seasons.

People have their priorities once they are given an opportunity to express them. The choice of a priority depends on the existence of alternatives among the competing choices for the scarce resources available. If communities have little or no confidence that the existing health system is able to meet their health-care needs, there is no way they will be willing to join a payment system unless they are persuaded. Their confidence may decrease if they have had a previous experience of making payments to a public finance service that eventually did not bring them the expected output. For example, consider a situation whereby communities blame their local or central government authorities for failure to provide basic social services such as water, education and transport. These services are believed to be supported by public funds collected from various taxes imposed either directly or indirectly to the community.

It is not uncommon to hear people asking why the government requires the community to contribute to the cost of running health facilities while the community believes they have been paying indirectly through income or commodity taxation systems. These examples are provided as an explanation why some members of a community, though able to pay, may be unwilling to enter financing system if introduced. This is why initial community sensitization is required before the authorities concerned decide to introduce any payment system that needs community support. Otherwise there will be a low response rate and the majority of those who respond may be those who either know that they might benefit more from a payment system or those who think that after joining the payment system, they are likely to demand for extra services and higher quality services regardless of the amount they have contributed a situation that can be referred to as a moral hazard.

Prepayments

The administration of a prepayment scheme may be difficult particularly when moral hazards are experienced. This situation is often controlled by either introducing co-payments for those who demand for more or higher quality services, or by minimizing what is considered to be unnecessary medical procedures and claims, as has been the case in most health maintenance organizations and insurance agencies in developed countries (Green, 1992). However, this becomes a disincentive to the clients (the insured) who may be discouraged by receiving what they perceive being lower standard quality of care than they expected. In most cases, sorting out claims presented by clients to an insurance or quasi-insurance authority takes time. Sometimes the many procedures that have to be followed to ascertain the rights of a client to claim for the service, causes some of them to withdraw their membership. The less educated people who may lack skills or confidence in claiming their rights may find it undesirable to join the financing scheme.

Adequate skill for the calculation of the amount each individual persons or household has to prepay for health-care is also a critical element in the planning of a prepayment scheme. It is important to have knowledge on how to determine the likeliness of illnesses or health risks to a person or members of households in a particular period for which payment has to be made. If there is an underestimate of the probability of people's illnesses which provides the

basis for determining the amount they have to contribute, there is a danger of imposing a rate of payment which is either less or higher than the required. Either of these, results in problems, if people pay less than they would be supposed to pay, the financing scheme will run bankrupt soon after it has started. If people pay more than they would be required to pay and come to discover this, there will be a loss of public confidence and membership to the scheme. The questions remaining is, 'who is responsible for estimating or suggesting the rate of payment (premium)? – is it the professionals or the community?, based on which criteria?— probability of person's health risks or socioeconomic status such as income (ability to pay), family size, age, sex, etc?'. The assessment of one's ability to pay is not easy, and where this is done, there is some subjective judgment that questions the reliability of the measurement criteria (Abel-Smith, 1994; Barker, 1994; Russell *et al.*, 1995 Ensor & San, 1996; Mubyazi, 1998).

The issues surrounding the prepayment scheme have to consider (i) the epidemiological situation of the population targeted (ii) the community perceptions of priority health problems (iii) the cost of medical-care services required per illness case (iv) the practicality of administering the scheme. In tropical regions where malaria and other communicable diseases are quite common, the probability of people suffering is high but the frequency of their suffering may not be easily known unless regular systematic research is carried out to establish this. Even if this is done, the ultimate rate of payment estimated may not be acceptable to the local populations. Consider an example of a hypothetical household with a family size of five and each face an average of three malaria episodes in a year, whereby the treatment cost per episode is roughly TShs. 1000/- (US$ 1.0) (for outpatients). This means that, one person requires 3,000 shillings a year for malaria only. The total cost of malaria treatment for the whole household will therefore be TShs. 15,000/-. In a recent study in a particular region in north-western Tanzania, the management committee of a particular hospital was able to estimate the cost of malaria treatment for an inpatient at TShs. 15,000/- per year per person. This includes costs of consultation, drugs, laboratory service, hospitalization and other minor services. An assumption was made that every individual will experience 3 episodes of malaria per year.

These rates of payment may sound too high for poor households who are committed to pay for other households needs such as school fees, kerosene or electricity bills, local development levies and as well as compulsory community contributions like condolences. On the other hand, it would be an underestimate to suggest that people pay less than such amounts while they will most likely require services relating to illness, unless the government or other agencies can cover the costs of the difference. In most CHF schemes in Mainland Tanzania, the authorities concerned have imposed rates of prepayments that are less than or equal to TShs. 10,000/- per household per year. Nonetheless, no sound information is available concerning the sustainability of the schemes. Meanwhile, other districts are considering to impose the same rate of payment once the CHF scheme starts in the near future.

In-kind payments

There are conceptual and practical problems that cannot be avoided should in-kind payment mechanisms be introduced in the formal health care delivery system. It should be noted that the introduction of community contribution is an area of controversy especially in its effects on equity and the burden such payments can place on the poor.

Most proponents of in-kind payments have tended to cite things like casual labour, farm crops, and any other household or personal possessions as forms of payment. However, they have failed to explore the potential risk of disposing of the property in response to a single illness event facing an individual or a family member. It is important to note that payment for health care is not a one-off event in disease endemic areas. Suppose a person disposes off his belonging to a health-care provider because of lack of access to cash, what is he likely to dispose off in future if he faces an illness again? Thus, people may be compelled to dispose off their personal belongings to meet their contemporary medical care needs but this can be done at the expense of today or future basic needs. That means, the opportunity cost of payment for health-care in-kind among poor families may be higher than would have been the case with cash payments.

There is also a problem of estimating the value of non-cash materials like animals or cash crops that can be used to compensate health care providers for their

services. Suppose a person suffers from malaria, how many chicken or kilograms of crops can be sacrificed to meet the treatment cost? Even in the case of casual labour, a problem may rise with the valuation of labour time one has to spare to compensate a health-care provider instead of paying him cash. Even where this has been done, no evidence is available regarding the easiness of arriving at an agreement between the payer and provider of services.

Another disadvantage of in-kind materials such as farm crops is their vulnerability to weather or storage conditions. Even where health care providers would wish to accept crops, the challenge is on where and how to store them before they find users or people who have interest in buying them. Exchange of health care for in-kind payments symbolizes the barter kind of trade. The limitation with this kind of trade is that, for exchange to be possible, there must be double coincidence of wants, whereby the interest of one party (say the seller) must coincide with that of the other party (the buyer). There is no evidence how this is the case in the current formal health care delivery system so that insight can be obtained to grasp any emerging gains for implementing this kind of payment in the formal health care delivery system in future. Scepticism to establishing this form of payment on a large scale and making it official today and in future is likely to persist due to the fact that the unreliability of crop markets in most developing countries makes health-care providers think twice or more about the rationale for accepting farm crops even if they wished to.

Payment of non-cash materials to health-care providers may sound encouraging to poor households or most women whom, due to various social-cultural ties and traditional values find it difficult or impossible to access cash. However, this depends on where one has to make such payments, for if there is a long travel distance, people may find it difficult to carry the materials required to a health-care provider. The problem of portability of tradable items contributed to the outdating of the barter system of trade.

Conclusion

Health-care payment mechanisms as alternatives to direct payment of user fees at the time of service need are essential and the reason for national and international advocacy for health insurance and quasi-insurance systems such as the community health fund. The acceptability of in-kind payments in the formal health care delivery system is acknowledged. However, it would be a mistake to underrate the practical implementation difficulties of such payments. The operational and social costs of administrative such payments may be higher than the cost of administering user fees. In the former case there is little room for making subjective decision regarding the rate of fees patients need to pay. Moreover, the time for the health-care user to bargain is reduced as compared to the time spent by in-kind payers to reach agreement with the provider on how much of what they have to pay.

Whether in-kind materials are accepted by health-care providers or not is not the only issue. It may be a fault to underscore the need for storage facilities to be in place if the acquired materials cannot immediately secure the market to transform them in cash terms that can be re-invested in the purchase of the replacement health-care. In conclusion, further research is essential towards a better evidence-base on the feasibility and desirability of in-kind payment mechanisms on one hand, and the practical problems of prepayment schemes in areas where they have been established, in order to suggest constructive mechanisms on how to improve the situation.

References

Abel-Smith, B. (1994) *An Introduction to Health Policy, Planning and Financing*. Longman, London

Abel-Smith, B & Rawal, P. (1992) Can the poor afford free health services?: a case study of Tanzania. *Health Policy and Planning* **4**, 329-341.

Barker, C. (1994) *The Health Care Policy Process*. Sage Publications

Creese, A.L. (1990) User charges for health care: a review of recent experience. *Health Policy and Planning* **6**, 309-319.

Ensor, T. & San, P.B. (1996) Health-care charges and exemptions in northern Vietnam. *Final Research Report submitted to the Bamako Initiative Research Program,UNICEF.*

Gilson, L. (1997) Lessons of user fee experience in Africa. *Health Policy and Planning* **12**, 273-285.

Green, A. (1992) *An Introduction to Health Planning in Developing Countries*. Oxford University Press, UK.

Hunson, K. & McPake, B. (1993). The Bamako Initiative: where is it going? *Health Policy and Planning*, **8**, 267-274.

Leighton, C. (1995) Health financing reform in Africa: an overview. *Health Policy and Planning* **10,** 213-222.

MoH (1997) *Draft Report of Health Sector Reform Programme of Work 1998/99 – 2000/2001.* Ministry of Health, Dar e Salaam, Tanzania.

Mubyazi, G.M. (1998) Willingness and Ability to Pay for Health-care in Tanzania Before and After the Introduction of Cost-sharing Policy: Evidence-based Analysis and Research Proposal: *M.A. Dissertation.*, Nuffield Institute for Health, University of Leeds, UK.

Mujinja, P. & Hausmann, S. (1997) Cost *Sharing Impact Analysis*. Final Research Report submitted to HESOMA and St. Francis District Designated Hospital, Morogoro, Tanzania, October 1997.

Russell, S., Fox-Rushby, J. & Arhin, (1995). Willingness and ability to pay for health-care: a selection of methods and issues. *Health Policy and Planning* **10**, 94-101.

Shaw, P. & Ainsworth, M. (1996) *Financing Health Care in Sub-Saharan Africa through User Fees and Insurance: a case study of sub-Saharan Africa.* World Bank, Washington DC.

TDR (1997) Tropical diseases research: progress 1995-96. Thirteen Program Report. *UNDP/ World Bank/WHO Special Program for Research and Training in Tropical Diseases,* Geneva, Switzerland.

Willis, C. & Leighton, C. (1995) Protecting the poor under cost-recovery: the role of means testing. *Health Policy and Planning* **10,** 241-256.

World Development Report (1993) *Investing in Health.* World Bank, Washington DC.