User fees, self-selection and the poor in Bangladesh

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The widespread uncontrolled introduction of user fees in any developing country is likely to have a disastrous impact on poorer patients. Furthermore, traditional targeting schemes aimed at their exemption are often expensive, difficult to administer and ineffective at reaching those in greatest need. This research study examines how user fees can raise revenue and target poorer patients, under the right market conditions, without resorting to costly targeting schemes. The authors draw their findings from case studies of cost recovery in the health and population sectors in Bangladesh.

The mechanism suggested in the paper is to use self-selection. It is argued that under certain market conditions poorer patients will choose the health-care option that is appropriate to their means. They will thus identify themselves as poor without having to be selected or tested by an independent authority. This self-selection allows the relevant authorities to cross-subsidize their market choice by over-charging the non-poor in other segments of the market.

1. Introduction

Many developing country governments, including Bangladesh, are afflicted by a 'double burden' of disease and scarce resources (WHO 1995). Unprecedented population growth and the emergence of new and chronic illnesses have placed extra demands on health care services. Despite massive efforts to combat such problems in Bangladesh, recent studies (Kawrine et al. 1995, 1996) maintain that the resource base is sufficient to meet neither future needs nor planned services. In an attempt to bridge the gap, an expansion of cost-recovery is being examined (Kawrine et al. 1995). Nevertheless, there are concerns that cost-recovery schemes, and in particular user fees, may restrict access to health services and have a detrimental effect on the poor. In a country where over 50 million people were estimated to be below the poverty line in 1991/92 (with a calorie intake below 2122 k.cals/person/day), such effects may be unacceptable (Bangladesh Bureau of Statistics 1991/92).

Furthermore, it is well understood that schemes aimed at targeting the poor for exemptions often miss the intended beneficiaries while being costly to administer (Mills 1991, amongst others). Under such circumstances, self-selection allied to user-fees has emerged in Bangladesh as a possible way forward. Given an appropriate market configuration, self-selection might help subsidize poor patients while avoiding the overhead costs of targeting schemes. This paper draws on Bangladesh’s experience to explore the conditions necessary for effective self-selection mechanisms when introducing and collecting user fees.

Needless to say, there are many other questions or constraints for effective implementation of user fees. In the remainder of this article we limit ourselves to the resolution of only one problem: how to generate revenue while still subsidizing the health care of poorer patients. After an initial introduction, Section 2 analyzes the issue of the exemption of the poor allied to user fee schemes. Self-selection is presented as a potential solution which is both cheaper to administer than traditional targeting schemes and more effective under the right circumstances. Section 3 analyzes three self-selection case studies from Bangladesh: the market for health care in district hospitals; the market for condoms, and the potential
implementation of a fast-track system for health care. The advantages and disadvantages of the self-selection approach are gleaned and debated. Section 4 sets out the appropriate conditions for application of user fees with self-selection and suggests some areas for implementation.

2. Exempting the poor from user fees: targeting and self-selection

Targeting

Targeting is often used to help isolate the poor from the non-poor to form the basis of an exemption scheme for health care provision. Its history, however, has been somewhat chequered. Having surveyed the available information, Gilson et al. (1995) note that reaching the poor through public policy is not a simple process of aiming at a target. Targeting the poor can run into three different sets of problems:

- technical feasibility of accuracy in targeting,
- application of exemption schemes,
- the ability of the poor to make use of their exemptions.

Technical feasibility

There are many informational difficulties associated with direct targeting. The definitions and measurement of household incomes, not to mention availability of information, can all lead to inappropriate or subjective eligibility (Mills 1991; Hecht et al. 1993). Even if a poverty line is calculated, this may not reflect the ability to pay of the individual within the household and, hence, may result in inaccurately targeted benefits. Seasonal income fluctuation, intra-community transfers and intra-household distribution are among the many factors which will undermine the accuracy and utility of exemption schemes.

Application of exemption

Even if the poor could be accurately and cheaply identified, the application of targeting is itself fraught with difficulties. Indeed, successful application relies on an efficient administrative system which is all too often absent. For instance, guidelines on application of exemptions are often missing, resulting in discretion and misallocation of benefits. Even assuming effective administration, national and local political factors may distort the application of exemption schemes. All too often the non-poor take precedence because of their political power.

Uptake by the poor

Those eligible for exemptions may not take advantage of them. Several factors may coincide here, including insufficient information about the particular exemption scheme, stigmatization of receiving exemption and the prohibitive (opportunity) costs associated with accepting the ‘benefit’ (Cornia and Stewart 1993).

These three factors may combine to make targeting an expensive and often ineffective option. As the accuracy of any targeting scheme is improved so costs of its administration are likely to increase. Past a certain point the expenses incurred in targeting may undermine the revenue generated from the implementation of user fees. Hence, either user fees are imposed with ineffective targeting, harming the poor, or the user fee initiative is considered financially unviable and dropped. Given the important role which user fees can play in both revenue generation and efficiency enhancements (Shepard and Benjamin 1993), it is important to find an alternative method for targeting poorer patients.

Self-selection

Rather than attempting to determine rich and poor by using some agreed definition it may well be simpler and less costly to let people identify themselves. Targeting relies on using externally imposed criteria and expensive disclosure processes to identify the poor. In contrast, in self-selection people implicitly reveal information about their wealth when faced with appropriate incentives.

Under what conditions could this occur? Given the problems of direct intervention, as embodied by targeting, it may be easier to use the market. People will identify themselves as rich or poor if it is in their own interest. (In contrast, targeting encourages
people to identify themselves as poor when they are not.) Self-selection requires that the market is segmented and that patients or consumers are free to choose whichever section of the market is most suited to them. Hence, by infusing the markets for health care with certain incentives, patients will reveal their wealth through their purchasing decisions. Ideally, both rich and poor patients will choose an option commensurate with their budgets. The authorities can then extract revenue from the market options chosen by the non-poor and use this to subsidize the market choice for the poor. This process of cross-subsidization may be an important element in financing the market option for the poor.

An example will demonstrate self-selection at work. In an idealized case, a monopoly market for health care is segmented into two goods, A and B, of which B is a simpler version of A, without extra benefits. Self-selection allows people to indicate their wealth by their choice between good A and good B. For good A, the supplier is assumed to pursue profit maximization, i.e. he supplies A up to the point at which the marginal cost of an extra unit of production is equal to its marginal revenue. In this market segment, user fees are set at a level which will maximize the supplier’s profit.

In contrast, the supplier does not pursue profit maximization for good B, because he is interested, at least partly, in subsidizing the health care of poorer patients. If the policy maker wishes to maximize his supply of B, in order to subsidize the health care of the poor as much as possible, he may use the supernormal profits gained from selling A to subsidize his production of B. Hence, he sets the price (user fee) of the cheaper good at a level lower than the average cost. 1

Would such an initiative avoid the problems associated with targeting? The beauty of self-selection is that it proposes a relatively simple and cheap alternative to potentially complex and costly targeting schemes, which are frequently flawed, as discussed earlier. Self-selection can direct patients to appropriate market options by channelling self-interest. In such a way the poor can protect themselves rather than relying on manna from heaven or what may be worse, exemptions from the authorities. In addition, the cost of self-selection is limited only to the cost of setting up the segmented market structure. In some instances such segmentation is already present, implying no cost for the system; in others it has to be created, implying a small cost in initial design and administration.

Nevertheless, self-selection may still have to struggle with problems hampering the uptake of the poor as a lack of information about market options and stigma associated with certain purchasing decisions could result in inaccuracy. The resolution of these issues, though, may not be difficult. As we argue in the remaining sections, self-selection can be highly effective under the right market conditions. This increased efficiency of self-selection, in certain circumstances, over targeting will help shield poorer patients from the burden of user fee schemes while allowing the authorities to extract much-needed revenue. Indeed, self-selection associated with market segmentation gives us the option of going much further than just exempting the poor from fresh charges. We can also subsidize their health care.

3. Self-selection case studies

Turning to Bangladesh there are a number of cases in which we can explore these issues further. The most durable cost-recovery schemes appear to be those that have self-selection built into them. A brief review of recent initiatives will help provide necessary material for discussing the appropriate application of self-selection with user-fees. The first case study presented is the admission procedure in district hospitals, followed by discussion of contraceptive charges and fast-lane health service programmes.

The market for health care at district hospitals

District hospitals in Bangladesh are characterized by excess demand, being nearly always full beyond capacity (Shamim Ara Begum 1995). This is partly due to the perceived failure of Thana Health Complexes (THCs), the next level of health care lower down the GOB (Government of Bangladesh) health infrastructure, to meet patient needs. It is also partly due to medically-inappropriate referrals from THCs. Doctors at THCs will often minimize their own vulnerability by referring patients to the district hospital with minor complaints. In turn, this reinforces in the mind of the patient the notion that district hospitals are more able to meet needs. The next time a patient is ill he is more likely to bypass the THCs and go direct to the district hospital.

On arrival at the district hospital a patient is faced with a choice between two market categories: one paying and one non-paying. The non-paying patients
do actually pay a token fee for admission and some medicines but their stay on the ward and consultations with and care from medical staff are officially free. The differentiation of the market is based on additional hotel services rather than the quality of medical care offered. Indeed, paying patients have their own private cabin, subject to availability. In addition to privacy they appear to receive marginally better food, for which they pay extra.  

It may be important to relax one of these assumptions to explore the rigour of the analysis. Indeed, the above may be somewhat simplistic in that the total effect on health status might be slightly different for paying and non-paying patients even if, in essence, the medical treatments are equivalent. This is because the extra goods may help the patient better consume the medical care offered; through improved peace of mind, for instance, the patient is better able to respond to treatment.

This is a complex issue. There are a host of factors which affect the patient’s ability to respond to treatment. For the poorer patient the psychic benefits of consumption of the extra goods may be easily undermined by the psychic costs associated with jeopardizing future consumption of essentials, through the payment of the higher price. The potential slight improvement to health status through the consumption of the extra goods may be negated by the prospect of reduced resources, reduced consumption and poorer health in the long run.

Hence, the patient’s decision is again restricted to his valuation of the extra goods against a basket of other goods, rather than an assessment of the medical differences of the alternative treatments. Self-selection still allows patients to choose the market option commensurate with their wealth and utility, even in this more sophisticated case. The medical treatment from each market option remains the same. In addition, the consumption of the extra goods is a relatively inefficient use of resources if improved health care is the sole objective of choosing the paying option. The patient interested in better health care might do better to look to other suppliers rather than just consume the extra hotel goods. In some instances, other health care providers might offer a more direct correlation between money spent and the quality of health services than the paying option in the district hospital.

The focus of the consumer’s decision between market options is the trade off between the extra (non-health care) benefits of the paying option and the money saved from the non-paying option for expenditure on other items. Most importantly, the patient will not be faced with an extremely problematic evaluation of the difference between alternative medical treatments. In addition, it is assumed that patients are aware, at least approximately, of the true price of hospital services (including hidden charges), and that there must be sufficient available information about the extra goods (hotel services).

Will rich users continue to use public sector services when they realise they are subsidizing the poor? The idea of cross-subsidizing the poor does not seem to be an obstacle in Bangladesh and, indeed, is explicitly built into pricing policy. Furthermore, the non-poor continue to use private cabins in public facilities regardless of the use to which the funds are put (Kawnine et al. 1997). What is noticeable, though, is the extent to which the non-poor pursue exemptions to avoid payment. There may also be little market choice. Public facilities are often local monopolies with sparse private sector competition.
They hold many of the scarce human resources during office hours, when the for-profit private sector is largely inactive. Even where there appears to be direct competition of services, charging regimes at public facilities often relate to a lower market segment.

**Charges for condoms**

Sustainability of the vast infrastructure for family planning delivery has long been a key concern of policy makers in Bangladesh. There are renewed pressures on the GOB to consider reintroducing more than nominal charges for its condoms to help with financing. Nevertheless, the GOB is not the only supplier in the market. The Social Marketing Company (SMC), a private firm with donor subsidization, has experienced recent success with partial cost-recovery and has rapidly expanded its share of the market. Our second case study looks in more detail at self-selection in the condom market, where SMC data suggest that commodity charges plus a segmented market have managed to generate approximately 60% cost-recovery of in-country operational costs, along with a 25% mark-up for retailers.

Before the introduction of charges, the authorities (GOB and donors) completely subsidized consumers. In imposing charges, the GOB and SMC attempted to reduce the subsidy by cost recovery, although full cost recovery has not occurred as GOB implicitly values family planning above its costs of production. Instead, the market for condoms in Bangladesh is highly segmented. Thanks to the marketing strategies of the SMC several brands are available to the consumer at different prices. All basically offer the same product. Consumer choice is based on the valuation of the ‘extras’ against the increased price, subject to a budget constraint. The decision is not unlike that made in the district hospital, as described earlier.

Self-selection appears to work quite well within the market for condoms. The use of higher-priced brands, offering higher status, allows the non-poor to purchase higher-priced goods while still letting the poor choose (almost) free brands. At the same time the extra revenue made from selling the higher priced condoms is used to help subsidize condom supply. It appears self-selection can operate efficiently to protect the poor in the condom market.

Yet the decision of which condom brand to purchase is only one of three basic choices to be made by the consumer in the face of a price rise in condoms. The consumer also has to consider whether to continue purchasing any family planning and, if so, which type?

The second decision involves a valuation of the relative benefits and costs of family planning for the household, especially in relation to the consumption of other goods and the household budget constraint. Thus, key factors that enter the decision of the consumer will be the economic advantages and disadvantages of a (or another) child, the gain or loss in social status and the price of family planning methods in relation to the household budget constraint. It is highly unlikely that the valuation of the consumer will match that of the Government (or its foreign development partners). There will undoubtedly be externalities to the consumption of family planning, or lack of it. For instance, the long-run effect of individual families choosing to have extra children may be that the local infrastructure is overburdened and that the economy may have difficulty in coping with an enlarged number of dependants. In addition, the Government might perceive hidden costs to a family’s decision to have extra children. Inappropriate spacing of children will increase the chance of malnutrition and may affect health status within the family. Consequently, the Government may conclude that the household’s valuation of the rate of return to family planning is incomplete, or at least does not reflect the social rate of return.

While the Government sees merit in intervention it also has to consider its own costs. If the Government is to boost contraceptive prevalence or acceptance it may well have to subsidize households’ expenditure, or at least run costly education campaigns. At some stage, however, the Government will come across its own budget constraint and must prioritize its activities. Still, the widespread withdrawal of subsidies may well hurt the poorer by pushing up prices. The dangers of increasing all condom prices or even just the price of the cheapest brand of condoms are not to be underestimated. Khuda et al. (1991) conclude, on the feasibility of introducing charges for condoms in Bangladesh, that such fees may work against the interests of the poor. In particular, they found that some clients in pilot areas would get into debt with field-workers supplying the contraceptives. It appears that self-selection must be accompanied by a market option affordable by the poor. Still, the removal of a subsidy implicitly promotes self-selection and consumer independence in the market. Self-selection in this case would give consumers the power to make
potentially uninformed and socially inappropriate decisions.

The third decision for the consumer relates to the costs and benefits of different methods of family planning. What are the advantages and disadvantages of alternative methods? A whole host of factors will guide the consumer’s decision, including the financial costs of each method, the effectiveness, associated medical effects and social stigma. Some of the effects may be difficult for the consumer to discern completely, for instance the risk of contracting STDs or AIDS. A rational decision may require information or education which is not available. To counteract this market failure, the perspective of Government and its foreign development partners is extremely important. Governments must infuse the extra information they have on family planning methods into the market, allowing self-selection to operate and protect the poor consumer. This process may well involve making available additional information and making the market better reflect national concerns, such as sustainability, health outcomes and cost to the consumer as well as ‘targets’ for population growth. Such issues suggest that a simple application of self-selection in this case may be socially detrimental.

**Fast-track health services**

Fast-track health services are currently under consideration by the GOB as a means to generate revenue in the provision of medical care. Fast-tracking is a scheme where some patients are allowed to jump the queue by special payment in a non-emergency situation. The medical care offered does not differ but the length of time spent in the queue does. Hence consumers indicate their valuation of their own time, and their wealth, by their market reaction. This market structure would seem, prima facie, an ideal candidate for self-selection.

This case study explores the conditions necessary for such a scheme to use self-selection to subsidize the poor while allowing revenue generation. The basis of self-selection is that the market can be segmented. Typically the poor will choose the option which benefits them most by weighing up the associated costs and benefits, assuming information availability.

Two factors must be taken into consideration:

1. The method of earning – while some patients may well be salaried and can take time off work, this may be more difficult and costly for a labourer, paid on a pro rata basis.

2. The objectives of the patient – the maximization of lifetime consumption may entail different behaviour from an objective of disaster avoidance (Binswanger 1980). The poor may be more driven by the latter and, consequently, time off work may be more costly.

Both these considerations may act to make the opportunity cost of poorer patients waiting for their health care higher than supposed. As in our previous case studies, the result of the self-selection process for the poor will be dependent on their budget constraint and their valuation of the non-medical goods on offer. In this case the patient is being asked to value time, and where the opportunity cost of the poorer patient is high, this may undermine the targeting benefits of the self-selection scheme.

A further point must be raised in relation to market segmentation. According to economic theory, the good offered to one group must not be subsequently transferable to the other group, i.e. there cannot be any resale of the good. If resale were possible, then the rich could try and manipulate the system and potentially undermine the segmentation. It would appear that if the health care good on offer is the same, no matter which market option, then there is no incentive for such trade. It appears that self-selection will work if the market offers the same medical good for both market options and leaves the consumer to choose between ‘extras’.

Trade might be possible in these extras or non-health care goods, even if not in the actual medical good itself. The benefit or extra of the fast-track system is that it saves time. Such time can have a high value in non-medical terms if it means losing income. For instance, consider two patients, one poor (A) and the other non-poor (B), waiting for treatment of a respiratory tract infection. Both must consider the value of the fast-track scheme in relation to queuing. Lost time may equate to lost income. In such a case B might try to get the best of both worlds – fast service without the associated queuing. Hence B might pay someone to queue on his behalf. As long as B pays the queueer a price lower than his valuation of his expected queuing time then he would prefer this option. A is most likely either prevented from the fasttrack by his budget constraint or does not value his time high enough to pursue B’s strategy.
Hence, there appears to be room for retrade in this case. How does this affect our outcomes, in relation to revenue generation and the poor? Whether such revenue is more useful with the queuers or in the health administrator’s hands is difficult to tell. In this case, self-selection may prevent poorer patients from being charged but, because of the transferability of the extras, may also limit the revenue collecting (and, hence, cross-subsidizing) potential of the scheme. Consequently, there would be less revenue for funding the health care of poorer patients and/or the health care system in general. Perhaps, non-transferability of the market extras would be an ideal scenario for self-selection. It may not be a suitable assumption, however, for the generation of some revenue while subsidizing poorer patients. The raison d’être of user fees is frequently their potential for revenue collection by the authorities and if this is seriously undermined by trade in extra amenities (in this case, time), then the scheme may not be viable from a financial perspective.

The fast track approach to self-selection, perhaps more straightforwardly than the other cases, points to questions about equity and fairness in the widespread application of user fees. In effect, the fast track case recognizes that certain inequalities exist among the starting-points (ability and willingness to pay) of various consumers at family planning clinics and makes use of those inequalities in the levying of user fees. Can this stance be justified? Taking our lead from Heilbroner and Thurow (1994): ‘We agree on violating the spirit of equality when we are convinced that inequality is for the common good’.

Fortunately, in Bangladesh, this condition is met by fast-tracking. Here inequality is used as a means to raise revenue which can then be ploughed back into the system. A policy consensus in Bangladesh has appeared among government and donors favouring the mobilization of resources through a user fee self-selection approach at secondary and tertiary level hospitals provided that the additional revenues are used to improve ‘service quality’ for the common good (Kawnine et al. 1995). It is the authors’ view that an important part of self-selection is not just revenue generation but subsidization of the market option associated with the poorer patient. Where there is risk of excessive crowding out of slow-track consumers this concept might be broadened to include using the revenue generated to expand service delivery. Where time in the queue starts to have an impact on the severity of the disease of the patient, this may be an important consideration.

4. Conclusions and recommendations
Criteria for the application of self-selection

From the case studies it is clear that self-selection is not an elixir for the ills of user fees, but under the right market conditions it may, at the very least, allow revenue generation for subsidizing poorer patients. In this section, we draw out the lessons of the three case studies to formulate appropriate conditions for successful application of self-selection. The criteria appear to be as follows:

1. The patient or consumer’s decision is restricted to non-health matters.

2. The patient or consumer’s decision involves little or no external medical impact on others.

3. The patient or consumer should have sufficient information about the market options or choices available.

4. The benefits and costs of the patient’s decision should be relatively unambiguous.

5. Self-selection is used to cross-subsidize health care for poorer patients while also raising revenue. (At the very least, the inequality reinforced by the use of self-selection is acceptable given the benefits of revenue generation.)

6. Ideally, market segmentation should be complete for self-selection and there should be no possibility of retrade.

7. The patient is not in need of emergency treatment.

8. There is always a market alternative for the poor which is compatible with their ability to pay.

Application of self-selection

How should this translate into practical policy? Initially, there are many areas where user fees and self-selection can coexist and meet the above criteria. Often the services associated with health care, but not health care itself, are those most amenable to user charges:
• Hotel goods for patients are the most obvious area but there are others including ambulance and transportation services, cafeterias, and accommodation and facilities for visitors.

• Packaging and promotion of brand names can give medical or contraceptive supplies extra value in the market. Hence, marketing strategies and advertising may be extremely important to generating effective demand and resource mobilization; but there must be appropriate market segmentation to allow a market option for the poor (criterion 8, above).

• Fast-tracking is another feasible option, but there are potential problems with inequality, ‘trade in time’ and impact on health of extra queuing time for slow-track patients. The financial feasibility of such schemes still deserves exploration.

• Stacking user fees, and their use in strengthening a referral system, may also be seen as an application of self-selection. In this way services which are offered at two levels are much more costly at the higher level. Although stacking has not been discussed in this article, the above criteria are still met allowing self-selection to protect the poor (given sufficient information about market choices, criterion 3).

The role of governments in this process is to create the market environment in which self-selection can work. By legislation, governments can alter the incentive structures facing patients and their families and friends when they come into contact with health care and its related services. By judiciously allowing user fees and self-selection in associated health care markets, the GOB can raise revenue while subsidizing the poor who choose to take the commensurate market option. Such incentive mechanisms are generalizable beyond user fees, and beyond the health sector, but their analysis goes beyond the bounds of this article.

Endnotes

1 Logically, there is another possibility for the provider. The supplier may decide to maximize profits from good A, while not subsidizing the health care of poorer patients. This option is considered later in the paper.

2 It must be noted that this position is complicated by many unofficial payments in the hospital (Kawinine et al. 1997). In this article, we deliberately avoid an in-depth analysis of their nature and we restrict ourselves to understanding their impact on self-selection. These unofficial payments will limit the success of self-selection when indiscriminate since they will tend to price out the poor from services. There is also some evidence to indicate that the unofficial payments narrow the difference in total payments between market segments. Yet, even with such payments, the data suggest that there still exists differential charging based on the provision of hotel services. This will allow self-selection to function, albeit imperfectly.

3 Given equivalent health care offered by each market option and an obliging household budget constraint.

4 Other private sector operators account for less than 5% of the market.

5 Excluding commodity costs.

6 This does not mean that condoms must be free. Indeed, Lewis (1986) notes, after reviewing contraceptive demand in several developing countries, that moderate charges may have a positive effect on demand ‘because of consumer perception that a product’s value is reflected in its price and perhaps through heightened incentives for providers’. Still, it is dangerous to apply this principle too liberally. Once out of a low price band, the poor may well be priced out or face problems with ability to pay.

7 In an emergency the patient or household may well be willing to pay for the fast-track option regardless of long-term effect on assets and income. The time saved by jumping the queue is important to the effectiveness of the health care. A danger for the application of self-selection, in this case, is that it may represent a short-term willingness to pay, irrespective of ability. Its application, here, would penalize the poor.

References


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