International Journal of Research in Social Sciences
Vol. 7 Issue 10, October 2017,
ISSN: 2249-2496 Impact Factor: 7.081
Journal Homepage: http://www.ijmra.us, Email: editorijmie@gmail.com
Double-Blind Peer Reviewed Refereed Open Access International Journal - Included in the International Serial Directories Indexed & Listed at: Ulrich's Periodicals Directory ©, U.S.A., Open J-Gate as well as in Cabell's Directories of Publishing Opportunities, U.S.A

Breaking Down Household Cost of Treating Ailments: A Proposed Framework in the Context of Injuries

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Abstract

Unlike most other standard commodities, incidence of illness/injury is compounded by high degree of uncertainty in terms of its occurrence, disappearance, the cost of treatment, to a great extent, it has the potential to entail heavy opportunity costs in terms of the general wellbeing of households. The uncertainty due to non-storability of health care make certainty a far-away option in planning health care expenses, though financial protection mechanisms try to shield the uncertainty element. The paper proposes a methodology for disintegrating the cost of treating ailments using an integrated demand and supply structure especially in the context of injuries – a classic uncertain ailment.

Background

Public hospitals, in many circumstances, fail to confirm to the neo-classical notion of efficiency which assumes uniform conditions for both public institutions and for-profit private institutions in terms of incentives faced by the providers, the case-mix addressed, social, Geographic and economic status of the users etc. For example, from qualitative analysis, the study finds that patients away from interior rural areas prefer to stay in hospital, because they may not get any attention at home, and staying at hospital ensures them some form of clinical cure and daily living. These patients do not have adequate resources to pay for transportation to report later for a review. In such cases, public hospitals act as an asylum for large number patients where they would have an abnormal length of stay.

Some of the instances are worth pointing. From the patient face-to-face, a tendency of many private hospitals to advise patients to stay for a longer duration of time has been noted. Such stays has not helped the patients to regain their lost health status, rather

deteriorated their injuries and thus, health status. In one case, a patient was forced to stay for five days by a private hospital informing the specialist would be available soon. Finally, the patient made a self-referral to reach a public sector tertiary centre. In another case, a patient with a head injury was admitted in a private hospital, advised two CT scans and made the patient stay for two days on the information that specialist would be attending the case soon. In this case too, the patient made a self-referral to a tertiary care private hospital increasing the financial burden faced by patients. These represent avoidable costs (in economic and health status terms) on the patient by the provider.

Provider inefficiency The behaviour of some of the public hospitals is also worth mentioning. Sub-optimal treatment is argued out to be one of the features in public sector hospitals especially at the advanced level whose bed occupancy rate is above normal ranges. Secondly, in some cases, patients were discharged assuming that they had their injury rectified, but some patients had to come back with serious illness. Thus the issue of under treatment is primarily a quality question but is indeed an issue of quantity as well which is clearly observed in public hospitals.

Hospitals with lower bed-occupancy are found to have a longer length of stay for injured in both public and private health facilities, which is an expected relationship. In such contexts, exit of health care institutions may improve the operating efficiency of the remaining hospitals in the local health care market (Lindrooth et al 2003). Lidrooth also found that those hospitals in the brink of closure were having a bed occupancy rate of 48 per cent. Process variables such as occupancy rate were suggested as a mediator between these risk factors and the outcome of hospital closure (Kennedy & Dumas, 1983; Longo & Chase, 1984; Lynch & Ozcan, 1994). The low occupancy rates of hospitals at the district level in some developing countries are generally considered as reflecting economic inefficiency (Barnum & Kutzin 1993). The current study gives a similar impression when we find that some of the district level and sub-district level hospitals have a lower occupancy rate compared to public sector tertiary centres. It is also important to note that hospitals rated as having a better quality were reportedly having a higher level of utilization. The health care facilities in which length of stay is longer would tend to have a per day lower average cost of treatment for similar category of case mix per day because the intensity of services provided is general1y less, assuming other things being constant.

There is a possibility that the additional stay in the hospital may not make improvements in the health status of the patient and may indicate inefficiencies as well. The inefficiency imposed by the behaviour of such hospitals inflated the financial burden of household unequivocally.

It is important to note that a number of patients can be taken care of effectively at rehabilitation centres which are less resource intensive. However, it is equally important to note that even in the full-fledged treatment phase; patients in many public hospitals are not able to get optimum treatment because of highly adverse patient-staff (doctor, nurse & assistant) ratio leading to overcrowding. As expected, private hospital patients have some advantage over public sector patients in terms of waiting time to start medical treatment after reporting at a health facility. However, there are some cases in both public as well as private settings where there exists wide variation in waiting time. Waiting time in a hospital is not only a question of macro level policy of having adequate doctors, but more importantly an internal management issue where the physician needs to be made available at the time of arrival of emergency patients at right place.

Mediflation

The study has analysed the mark-up levels of some standardized medical goods only. Average difference in the selling price (after controlling for quality of the diagnostic input and output) of diagnostics is about 297 per cent with a range of 33.3 per cent and 500 per cent inclusive of both public sector and private sector diagnostics market. However, the difference in selling price of diagnostics narrowed down to an average of 56.12 with a range of 25 per cent to 92.3 per cent when the private sector diagnostics alone is included. The prices of diagnostics remain constant for the last two years except in the public setting.

Supplier-induced demand

Incentives faced by the provider constitute the gold-mark for distinguishing between inefficiency at provider level and supplier induced demand. In many economic studies dealing with the health care sector the physician has an informational advantage in supplying medical services (Liu and Mills 1999). The existence of incentives is the kingpin in supplier-induced demand and any incentive structure facing the provider where the revenue of the provider has a direct linkage with the quantity of services provided, and

then one could unambiguously doubt a clear chance for inducing demand. In a study, Muraleedharan finds prima facie to suspect the existence of supplier-induced demand of diagnostic services in Chennai, where the physicians have mostly accepted that there exist networking between private medical institutions and diagnostic firms (Muraleedharan 1999). Another study found that there existed wide variations in the prescription of drugs for the same health condition with 75 percent of the consumption was ruled unnecessary by an expert panel (Meng et al 2000).

Over-prescription is one of the prime reasons for injured downgrading the ranking of private sector, as found in the study. Some studies also reached similar findings elsewhere. For instance, the private sector health facilities were less likely to refer the patients to higher levels of care (Meng Q et al 2000). The private facilities try to retain the patient till some serious complications arise, and such referrals would be towards public sector so that there is an absolvement of responsibility. The evasion is because of two things: Firstly, when dealing with patients with serious complications, there is a higher probability of risk involved which can be safely shifted to the public sector or another higher level hospital. Secondly, death to a patient also means the reputation of the hospital is at stake which will make the facility loose some proportion of the existing or potential market.

The phenomenon that availability leading to utilization is more or less clearly established in the analysis. Firstly, hospitals with lower utilization (measured by lower bed occupancy rate) tend to have a longer length of stay than a hospital with higher bed occupancy rate in public and private sectors at different levels, presuming severity remains same. Secondly, there exists a positive correlation between hospitals having availability of scans and utilization of such facilities across different providers, assuming severity is same across providers.

The present study found that diagnostic firms reported paying 'rewards' to physicians who refer patients to their diagnostic firms. Diagnostic firms working independently charge the highest across the study site. These firms have tie-ups with many private hospitals and public physicians. One of the practices reported is that cases which require complex analysis are referred to some diagnostic facility within a public hospital. One of the physician interview revealed that majority of the scan results reported from these private

diagnostic firms have results 'no relevant findings' further confirming the patient being subjected to additional financial burden of injury care. The study supports the view of a scholar who has argued earlier that competition in medical care sometimes lead to 'flat-of-the- curve medicine' (Newhouse JP 1982). Existence of SID in a system starts a vicious cycle of cost escalation and ineffective treatment. Because once the patient is prescribed more than necessary, the patients which follow the earlier one is also likely to be prescribed and it becomes a practical standard later on.

Coping methods

Using Grossman's demand for health framework, health shocks like RTIs are found to be random reductions in the stock of durable capital called health stock which is stochastic and deterministic because a sizeable number of injured were permanently disabled and the associated reductions in the total health stock of the household were also beginning to decline. Wagstaff (2005) finds evidence that health shocks are associated with a reduction in consumption in Vietnam, in particular for uninsured and better-off households. A study which looked into the question of intergenerational well-being finds that health care costs and high interest loans are two of the prominent reasons for loss of intergenerational well-being and entrapped into poverty (Krishna 2004). Households were able to borrow to cover unexpected medical bills but at the risk of being trapped in long-term debt. Indeed, recent evidence from the US suggests that nearly half of personal bankruptcies are due to medical problems, with both out-of-pocket payments and loss of income being contributing factors (Himmelstein, Warren et al. 2005). Smith (1999) finds that onset of a serious health condition reduces wealth by an average of US$17,000. Stephens (2001) finds that disability of the head of a household is associated with a long-term decline in consumption. Not surprisingly, health shocks have also been shown to have a large impact on medical expenditures (Smith 1999; Wu 2001). Many members of the injured had to forego their routine medical consumption owing to the current episode of the injured.

Dis-saving and borrowing are the two general methods resorted to by households in the face of economic shocks. However, these may incur high level of opportunity costs on other components of household consumption which is called the "costs of consumption smoothing". Illness-related costs particularly affected patients with incomes below the

poverty line and their average out-of-pocket expenditures for the disease amounted to more than 15% of annual household income, while incomes were reduced by 5 % due to illness-related effects. However, 11.8% of patient households took out bank loans, and 15.9% sold part of their property (Karnolratanakul et al 1999).

The medical cost of a serious injury was over twice that of their poor counterparts. When compared to average household income, rural poor households paid over three times the share that non-poor households paid. Indirect costs were higher for poor households. In rural Bangladesh, the majority of poor households reported suffering a decrease in household income, food production and consumption, and living standard. In Bangladesh over 60 per cent of poor households went into debt. Two-thirds of poor households also had to borrow money to cope with the increased medical costs and reduced earnings in Bangalore, India (Aeron-Thomas et al 2004). Evidence from Vietnam says that in the year 2001, one fifth of the total study population spent more than 20 percent of their non-food consumption on health care (Wagstaff and van Doorslaer 2003). Thus coping strategies on the demand side, mediflation, inefficiency contribute to total financial burden faced by individuals.

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