

Impact of Out-Of-Pocket Health Care Financing and Health Insurance Utilization among the Population: A Systematic Review

Nagaraj Shet¹, Ghulam Jeelani Qadiri², Bhuvanesh Sukhlal Kalal³,
Sunita saldanha⁴

¹Assistant Officer Operations, ²Professor, ⁴Associate Professor,
Department of Hospital Administration, Yenepoya Medical College Hospital, Deralakatte, Mangaluru-575018,
Karnataka, India.

³Senior Research Fellow (CSIR), Department of Biochemistry, Yenepoya Medical College; and Yenepoya
Research Centre, Yenepoya University, Deralakatte, Mangaluru-575018, Karnataka, India.

Corresponding Author: Nagaraj Shet

ABSTRACT

The enactment of the insurance regulatory and development act (IRDA) in 1999 allows private and foreign entrepreneurs to enter the health insurance market and at present Indian health insurance sector offers different kind of health insurances like social health insurance, private health insurance and community based health insurance etc. But even with this as depicted by many studies penetration of insurance especially at rural India is very low and people are paying their health care cost through pocket.

To understand this issue, present article tries to provide detailed review on Out-of-pocket (OOP) expenditure and their impact on the households, awareness and attitude regarding health insurance in population. Using CINHALL, EBSCO Host and Medline databases the search was conducted for a period of 4 months from February 2015 to May 2015. Most of the studies reported the OOP payments on households and role of health insurance on financial protection, health service utilization but less often on quality of care, same time demonstrates lower level of awareness regarding health insurance in rural population.

Review findings supports the view of entities like WHO that prepaid health financing mechanisms are important alternative for OOP payment methods and which are capable to rule out the negative effects of direct OOP payments and also helps to providing universal health coverage.

Key- Words: health care expenditure; Social health insurance; Out-of-pocket payment; India

INTRODUCTION

Out-of-pocket (OOP) expenditures are the major health financing mechanism across most of the South-East Asian and other developing countries. OOP Expenditures are non-reimbursable fees which a patient or family is responsible for paying directly to health practitioners or suppliers, without intervention of a third party. It often occurs, when publicly funded

facilities are unable to provide the required health services and supplies for free or through insurance. ^[1,2] Often this OOP expenditure poses a colossal burden on poor households. ^[3] The costs are frequently high enough so that households are unable to recuperate them from existing resources, and, hence, ultimately slip deeper into poverty. As a result, protecting households from catastrophic health expenditure

continues to remain as a formidable challenge, particularly for countries with high levels of poverty. [4]

India was ranked as having the 42nd highest average OOPE, with 74.4 % of private expenditure being paid as OOP. [5] In the year of 2012, India ranked third in the World Health Organization's latest list of "countries with highest OOP expenditure on health" in the south-east Asia region. [6] Over 80% of the total health financing is private financing, much of which takes the form of OOP payments (*i.e.*, user charges) and not any prepayment schemes. [7] The World Bank (2002) estimates that one-quarter of all Indians fall into poverty as a direct result of medical expenses in the event of hospitalization. [8]

It is now widely acknowledged that health care expenditures can impoverish individuals and households. [9] The discussion, debates and evidence around the effect of OOP payments on health and poverty outcomes was so intense that in 2005 the Member States of WHO adopted a resolution encouraging countries to develop health financing systems aimed at providing universal coverage and The World Health Organization (WHO) considers health insurance a promising means for achieving universal health-care coverage. [10] But, penetration of Insurance in India is low due to lack of awareness or state of functioning of the available health insurance schemes. [11,12]

To improve the knowledge, present article evaluates OOP expenditure on health and their impact on the households, awareness and attitude regarding health insurance in population and their source of information, satisfaction level of the population utilizing various health insurance policies.

METHODS

In order to obtain the relevant literature a search was made of three data bases, CINHALL, EBSCO Host, and Medline. The bibliographies of the selected articles also revealed some relevant articles.

The search was conducted for a period of 4 months from February 2015 to May 2015.

All titles and abstracts of the initially identified studies were screened to determine if they satisfied the inclusion criteria. Full text articles were retrieved for the selected titles. Reference lists of the retrieved articles, as well as previous review articles, were searched for additional publications.

Studies were included if they

- (i) Were randomized controlled trials, cohort, case-control or cross-sectional studies, or qualitative descriptive case studies;
- (ii) Studies that were published any year up to 2015.
- (iii) Studied the impact of OOP catastrophic payment on house olds
- (iv) Studied the impact of health insurance on resource mobilization, financial protection
- (v) Studied the awareness, attitude, satisfaction regarding health insurance

Studies were excluded if they:

- (i) Were policy reviews, opinion pieces, editorials, letters to the editor, commentaries or conference abstracts.
- (ii) Were duplicate references from different databases.

The key words used in these searches were: Health insurance, out of pocket (OPP) payments, catastrophic payments, health insurance knowledge and attitude.

RESULTS

From the initial search for peer-reviewed articles based on title many were excluded and only few full text references were retained for further scrutiny. Detailed inspection of abstracts and texts resulted in only few quality articles. This includes references found through screening reference lists in retrieved articles, snowballing and additional screening of organizational web sites .most studies used an observational design and only a few used

a randomized controlled or other type design.

Most of the studies reported frequently on the impact of OOP payments on households and role of health insurance on financial protection, health service utilization but less often on quality of care, same time demonstrates lower level of awareness regarding health insurance in rural population and stresses on need for education on the concept of insurance and information on health insurance for rural and urban population to extend health insurance coverage on large scale.

DISCUSSION

Out-Of-Pocket Expenditure

OOP expenditure is any direct outlay by households, including gratuities and in-kind payments, to health practitioners and suppliers of pharmaceuticals, therapeutic appliances, and other goods and services whose primary intent is to contribute to the restoration or enhancement of the health status of individuals or population groups. It is a part of the private health expenditure. [13] Large OOP expenditure on health may push household's consumption expenditure below poverty line. Various studies examine effect of OOP health expenditure on poverty head count and whether such expenses push households deeper into poverty.

Some major studies examining the issues related to catastrophic OOP health expenditure, *i.e.*, OOP expenditure that adversely affects consumption expenditure, are reviewed below.

Wagstaff and Doorslaer (2003) pioneered the minimum standard approach based on the concept of horizontal equity. [14] Many studies used this and other approaches such as concentration index to analyse distribution of financial burden due to OOP health expenditure and poverty impact of OOP health expenditure for different countries. [12-17] Findings of these studies call for policy measures to protect household's consumption expenditure in the event of health shock. For this purpose, it is important to analyse the determinants of

health expenditure and provide some policy measures to reduce household's OOP payments on health care.

Cavagnero *et al.* (2006) analyses determinants of health service utilisation and probability of incurring catastrophic OOP payments. [18] The paper brings out the importance of medical insurance in reducing the probability of catastrophic OOP health payments. The results also show that presence of senior members, education of head of the household and income increase the probability of incurring catastrophic OOP health expenditure. The limitation of this approach is that threshold level defining catastrophic OOP payments is set arbitrarily at 40 %, another limitation is that the paper does not extend the analysis to examine the determinants of extent of catastrophic OOP expenditure. Various issues related to OOP expenditure on health has also been studied for India, [1,3,19] shows the OOP health spending using household level primary and secondary data.

Gumber (2001) uses primary survey in Gujarat to find the effect of micro health insurance provided by SEWA, a women's union, on access to health care and OOP expenditure by estimating two-part model. [19] The results of this study show that social insurance, care provider, and demographic characteristics of household are important determinants of OOP health expenditure. The study is based on a purposive sample survey covering 1,200 households from Ahmadabad and neighbouring areas. Thus, sample is not representative and results are valid only for the sample. Numerous studies have indicated that the poor in India become utterly vulnerable when they seek medical intervention for major ailments. [20-22] Results from a study also indicated that, every year, about one quarter of the hospitalized people slip into poverty due catastrophic payment for availing such care. [20]

A seminal work on catastrophic health expenditures in 59 countries published by Lancet (Xu *et al.*, (2003) indicated that there was wide variation in

the proportion of households facing catastrophic payments from out-of-pocket health expenses. [23] The authors identified three key preconditions for catastrophic payments as the availability of health services requiring payment, low capacity to pay, and the lack of prepayment or health insurance. The authors concluded that individual, particularly in poor households, can be protected from catastrophic health expenditures by reducing a health system's reliance on out-of-pocket payments and providing more financial risk protection.

O'Donnell *et al.* (2005) and Garg and Karan (2005) examine the determinants of probability of incurring catastrophic OOP health expenditure and extent of catastrophic payments using two-part model. [1,13] While Garg and Karan concentrates on India, O'Donnell *et al.* (2005) studies determinants of OOP expenditure for six Asian countries including India. [1,13] For India, these studies use household level consumption expenditure data collected by the National Sample Survey Organisation for year 1999-2000. The findings show that higher consumption expenditure is associated with higher probability of catastrophic OOP expenditure.

Another study [24] identified the key determinants of catastrophic health expenditure as economic status, household health care utilization especially for modern medical care, illness episodes in an adult household member and presence of a member with chronic illness. A study of Krishna *et al.*, (2006) has mentioned that the debt for health care have robust associations with poverty creation and the interaction of these factors is very significantly implicated with the analysis of households' descent into poverty. [25] Also out-of-pocket payments on health care have been identified as one of the main reasons why people receiving microfinance credits default on loan repayments and trapping into poverty. [26]

Rama Joglekar (2008) examines the impact of health insurance on catastrophic

health expenditure. [4] Results show that the poorer households are more vulnerable and have to spend larger proportion of their total budget on health care than the richer households. These findings point out the need to formulate the policy to financially protect poorer households from health shocks and reduce the economic burden of illness. Same time analysis also show that the probability of catastrophic OOP expenditure reduces by 10%, if the head of the household has medical insurance and insurance reduces the extent of total budget allocated towards OOP health expenditure in urban areas. Increased insurance coverage may protect households from catastrophic health expenditure without increasing public expenditure on health. However, further examination in this matter is required as the insurance coverage increases from its present negligible level.

A study on out-of-pocket expenditure and poverty has clearly shown that OOP health expenditures account for an average increase in poverty by as much as 3.6 and 2.9 % for rural and urban India respectively. [27] Garg and Karan assessed the differential impact of out-of-pocket (OOP) expenditure and its components between developed and less developed regions in India. [13] The results showed that OOP expenditure is about 5% of total households' expenditure (ranging from about 2% in Assam to 7% in Kerala) with higher proportion in rural areas. Further in order to reduce OOP expenditure targeted policies are needed which in turn could help to prevent almost 60% of poverty.

Health insurance

Selected studies related to awareness and determinants of health insurance are reviewed.

Purohit and Siddiqui examined the utilization of health services in India by making the comparison of Indian states in terms of low, medium and high household expenditure on health care and concluded that there is no serious government initiative to encourage utilization of health services

by means of devising health insurance. [28] Sanyal *et al.*, examined that the burden of health care expenditure in rural areas was twice in 1986-87 as compared to 1963-64 and also provided that household is the main contributor to the financing of health care in India, so the health planners would have to pay more consideration regarding this. [29]

Gumber and Kulkarani, found that there was strongly expressed need for health insurance among low income households in both rural and urban areas. [30] This need has arisen primarily because of heavy burden of out-of-pocket expenditure on them while seeking health care. The need for education for rural and urban populations alike on the concept of insurance and information on health insurance is a crucial aspect in extending health insurance coverage on large scale. Gupta *et al.*, demonstrated a wide disparity across selections on willingness to participate which focuses on challenges for the new system would be to pool individuals across risk and economic status categories, setup a multi-tier system to meet objectives of equity and efficiency in health care delivery and for planners and regulators, to keep health insurance separate from other non-health insurance. [9]

Asgary *et al.*, estimated the demand and willingness to pay for health insurance by rural households in Iran and concluded that a significant percentage of population (more than 38%) live in rural areas, but the health care insurance currently operating in urban areas. [31] In order to provide rural areas with same level of protection as urban areas, the difference would have to be subsidized. Ahuja *et al.*, concludes that Health insurance is emerging to be an important financing tool in meeting health care needs of the poor. [32] Neither market mediated nor government provided insurance is an appropriate way of reaching the poor. Community Based Health Insurance (CBHI) is more suitable arrangement for providing insurance to the poor. Development of private health insurance in the country has both potential risks and benefits in improving the access of

the poor to health services. Appropriate regulatory changes can minimise the risks and turn potential benefits into concrete gains for the poor.

Further, the demand for health insurance is limited where supplies of health services is weak and explained interstate variation in demand for health insurance by poor in relation to variation in healthcare infrastructure. [31,32] Beside this the study also provided that healthcare infrastructure is positively related to demand for health insurance by poor, whereas the proportion of Below Poverty Line (BPL) population is negatively related. In order to build demand for health insurance, it is necessary to address the demand side and at the same time design the insurance schemes by taking into consideration the paying capacity of the poor.

Ahuja and Narang provided an overview of existing forms and emerging trends in health insurance for low income segment in India and concluded that health insurance schemes have considerable scope of improvement for a country like India by providing appropriate incentives and bringing these under the regulatory ambit. [33] The study suggested that in order to develop health insurance for poor in a big way, health care provisions need to be strengthened and streamlined as well as coordination among multiple agencies is needed. [33] Mudgal *et al.*, examined that whether consumption expenditure of households in rural India was insured against medical ailments. This study found that the villagers were not able to perfectly share the risk of all shocks. [34]

Sepehri *et al.* examines the impact of social health insurance in Vietnam on OOP expenditure using panel data for households to account for unobserved heterogeneity. [35] This specification captures the effect of household level unobserved factors which are constant over time. The study shows that insurance has negative and significant impact on OOP health expenditure. Further, insurance is found to reduce OOP expenditure more for patients with lower

incomes than for the patients with higher income

Dror *et al.*, laid seven myths regarding health insurance and examined the realities behind these myths. [36] The evidence shown that most people are willing to pay 1.35% of income or more for health insurance and the solvent market for health insurance business exist in India; however tapping of it is contingent upon understanding the customer's needs and wants. Dror *et al.*, examined why the "one-size-fits-all" health insurance products are not suitable to low income people in India and provided that there is presence of considerable variability to pay for health insurance which is because of multiple reasons like variability in income, frequency of illness among households, quality and proximity of providers (private, public) in different locations. [37]

Reshmi *et al.* found that the awareness of health insurance was found to be 64%. [38] Around 45 % of the respondents came to know about health insurance from the media which played an important role in the dissemination of information. The middle and low socio-economic groups favoured government health insurance compared to private health insurance. They suggested that government should come out with a policy, where the public can be made to contribute to a health insurance scheme to ensure unnecessary out-of-pocket expenditures and also better utilization of health care facilities. [38]

A study conducted by Bawa *et al.*, on awareness and willingness to pay for health Insurance shows that just 19.4% are being covered by some form of health insurance and large chunk of the population is still financing health care expenditure without health insurance. [39] Moreover it was observed that there are 7 key factors by clubbing the related variables under it which are acting as barrier in the subscription of health insurance. These are lack of funds to meet costly affair; lack of awareness and willingness to join; lack of intermediaries' outreach and capabilities; lack of reliability

and comprehensive coverage; lack of availability and accessibility of services; narrow policy options; and prefer other mode to invest (followed by friends, relatives *etc*). Alternatively, the analysis of willingness to join and pay for health insurance has been made to know whether non health insurance policyholders are ready to buy it or not and the results provided that very few percentage i.e. 11.9% are ready to buy health insurance without any conditions and 19.8% are willing to buy only if certain conditions will fulfill. Remaining is not ready to buy, still need some time or not provided with any response. Another similar study conducted in Darjeeling by Ghosh *et al.*, shows that just 18.5% are being covered by some form of health insurance and large portion of the population is still financing health care expenditure out of pocket. [40] Various socio- economic variables like marital status, education, income level, occupation *etc.* drives people of Darjeeling to take the decision of taking health insurance

CONCLUSION

Review depicts high quality of studies that demonstrated the OOP payment is the major health financing mechanisms across most of Asia and other developing countries, often posing an enormous burden on underprivileged households. The costs are frequently high enough so that households are unable to recuperate them from existing resources, and, hence, ultimately slip deeper into poverty. However, unfortunately, the option of financial protection mechanism to mitigate such burden is very limited. As a result, protecting households from catastrophic health expenditure continues to remain as a formidable challenge, particularly for countries with high levels of poverty.

Health insurance can be an alternative to user fees as a health financing mechanism. They hold strong potential to improve financial protection and enhance utilisation among enrolled population. And they can also foster social inclusion. This

underscores the importance of health insurance as an alternative health financing mechanism capable of mitigating the detrimental effects of user fees, and as a promising means for achieving universal health-care coverage.

Many believe that health insurance schemes, through increased utilization patterns and subsequent income generation, can improve the quality of care, and that this, in turn, can lead to higher health insurance enrolment. Research is needed to explore this mutual reinforcement.

Review findings thereby support the view of entities such as WHO that consider prepaid health financing mechanisms an important alternative capable of mitigating the detrimental effects of user fees,⁴⁰ as well as a promising means for achieving universal coverage.

Significance For Public Health: Present article acknowledges that out of pocket healthcare financing mechanism can drive individual and household into poverty by focusing on healthcare needs, healthcare expenditures, level of satisfaction of the population with respect to existing health insurance scheme and also least barrier for non-subscription of health insurance schemes which might help to plan user friendly health-insurance in future which may intern help the population to meet the healthcare needs without much financial burden.

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