CHAPTER – II

HEALTH CARE EXPENDITURE – REVIEW OF LITERATURE

2.1: Introduction:

Health care system in India consists of public, private and other service providers. Other providers include charitable organisations, non-government organisations as well as faith healers and less than fully qualified service providers. In terms of financing health, households’ out-of-pocket expenditure and government financing account for more than 95 per cent of total health expenditures in the country. Spending by household alone account for more than 70 per cent of total health expenditures in India (GoI, 2009).

Health policies in India often focus on the public spending on health and its allocation, efficiency and related issues to set the agenda. In the economy as a whole, this public spending on health forms only a smaller proportion of the total spending on health, as the households or the out of pocket expenditures account for more than 70 per cent of total health expenditures. Such high out-of-pocket expenditures on health often lead to indebtedness of households. Lack of availability of information on household spending on health is one of the reasons for its exclusion on many occasions. But the availability of representative and reliable data from National Sample Survey Organisation (NSSO) facilitates analysis of household expenditures for selected time points based on the year of survey.

A number of initiatives have been made by the Government of India to mitigate catastrophic impact on households on account of ill-health. One such
major initiative in the recent past is the launch of National Rural Health Mission (NRHM) in 2005. One of the goals of NRHM was to reduce out-of-pocket expenditure in total health care expenditures. With this objective in the background, the Government of India allocated large sums of money through various national health programs since the initiation of NRHM.

2.2: Financing Health Care: A Review:

Budgetary allocation to the health care sector was downsized in many of the major states of India since 1987-88, when the states faced severe fiscal constraints (Selvaraju, 2003). The share of health in revenue budget among major states declined from 7.19 per cent in 1985-86 to 5.56 per cent in 1998-99. The initiation of the structural adjustment programmes in 1991 forced the Central Government to reduce the Central transfers to the states in order to achieve the targets of fiscal deficit (Tulasidhar, 1993). The states were left with a reduced resource pool and they in turn were forced to reduce budgetary allocation to various sectors. Under such circumstances, “soft targets” such as health and educations sectors face reduced budgetary allocation. Health sector of many states in India too went through such severe resource squeeze since early 1990s.

The World Development Report 1993 (World Bank, 1993) observed that recurrent expenditures on primary care inputs other than salaries is particularly vulnerable when fiscal consolidation takes place in any country. This is true in the case of India as well. The expenditure on salaries alone account for more
than 70 per cent of the total health budget of most of the states, leaving very little for other components of health care. Since the expenditure on salaries is committed expenditures and cannot be downsized immediately, any reduction in the budget directly affects the expenditures on items like, drugs, medicines, maintenance, etc. As a result, the quality of the services rendered deteriorates in the public facilities. Levy of user charges are often considered as means to generate additional resources. The World Development Report estimates that user charges can generate revenues to the extent of 10 to 20 per cent of total government spending on health (World Bank, 1993). Though user charges are often viewed as anti-poor, the patients in practice often end up paying much more for supposedly free services. For instance, patients in India, Indonesia and Viet Nam had to pay 2 to 3 times the official fees for each visit in terms of indirect costs such as transport, the opportunity cost of time spent, etc., for availing the services as revealed in the World Development Report 1993. All these tend to suggest that decline in the public spending on health tend to increase the burden on the households as it would push the out of pocket expenditures on health upwards. The World Development Report also observed that this may not hold true in the case of poorer countries, as there is no apparent link between the public and private shares of health expenditure and also the proportion of income devoted to health.

It is evident that household expenditure on health has remained substantially high around 70-80 per cent of the total health expenditures in India (GoI, 2009). For example, nearly 74 per cent of health expenditures in Burkina
Faso (Saurerborn, et.al. 1995), about 55 per cent of the health expenditures in Egypt (Berman et.al. 1995) and about 75 per cent of the health expenditures in India (Bhat, 2000) are incurred by households. Further, rural households bear the maximum burden as they account for about 85 per cent of the total household expenditures in rural India (Sanyal 1996).

Waddington and Enyimayew (1990) and Collins, et.al. (1996), attempted to assess the impact of user charges and found that the level of utilisation of health services, particularly the curative services by the poor decline drastically when user charges are introduced or revised upwards in the short run. But in the long run, reverts back to a level nearer to the previous one over time. But a number of evidences suggest that poor are adversely affected by the levy of user charges. The levy of user charges significantly reduce the consumption of health services. For example, Gertler and van der Gaag (1990) found that the price elasticity of hospital and clinical services for the poorest segment of population was twice that of richest income quartile for different levels of prices and income in two developing countries. However, there are no conclusive evidences about the impact of levy of user charges on the level of utilisation of health services, especially by the poor.

Acharya, Carrin and Herrin (1993) based on a study on rural households in Nepal found that the poorest quintile spent about 10 per cent of their income on health whereas the richest quintile spent only 6 per cent of their income. Households in Vietnam spent about 7.1 per cent of their income on health (Ensor and Pham 1996) whereas in Bangladesh, private health expenditures accounted
for 3.1 per cent of the per-capita household income (Sen 1997). Mishra, Pandey and Sinha (1993) based on a study in a tribal area of Madhya Pradesh found that spending on health care accounted for 3.4 per cent of household income among tribal households. In Gambia, the average household spending on health was around 6 per cent of household income. Further the level varied between 10.0 per cent to 3.4 per cent for low income and high income households respectively (William 1994). In Egypt, households spent an average of 10.8 per cent of per capita income on health care and it ranged between 8.7 per cent for the richest quintile and 14 per cent for the poorest quintile.

In the case of India, households spend nearly 4.90 per cent of their income on curative health care. Further, it is the rural households which bear the largest burden to the extent of 5.28 per cent as compared to their urban counterparts i.e. 4.29 per cent (Shariff 1995). A study of households with dengue episodes in Cambodia reveals that even a relatively short one such as dengue in a young child, frequently causes catastrophic health expenditure leading to indebtedness among poorer households. Follow-up of the households which had taken loan for treatment of illnesses reveals that nearly 62 per cent of households remained indebted even after one year of the illness episode (Damme, et.al. 2004). A study among five sample states in India on cost of illness based on a household survey reveals that median per-capita cost of illness is about 6 per cent of per-capita income. This study further concludes that the cost of illness ranged between 38 per cent and 128 per cent of monthly per-capita income of households in the five sample states (Dror et.al. 2008). All these evidences
suggest that the burden of health care costs is heavier, particularly for the poorest and vulnerable households across comparable countries as well as in India.

There is already an extensive literature on the relationship between health care expenditure and gross domestic product at the macro level. However, these are primarily limited to OECD countries or developed countries. Very little evidence is available for African countries, Asian countries and on India. Availability of reliable and comparable data is often cited as the reason for such lacuna. An important finding that emerged from the earlier studies is that the ratio of healthcare expenditure to GDP increased as countries progressed economically as reported in the studies by Abel Smith (Brian 1967). These studies found that after controlling for inflation, exchange rates and population, GDP of a country emerged as a major determinant of health expenditure. In a seminal paper, Newhouse (1977) attempted to explore the determinants of the quantity of resources any country devotes to medical care. The analysis suggests that per capita GDP of a country is the single most important factor affecting health expenditures. The study found a positive linear and relationship between health care expenditures and GDP. Income as a major determinant of health care expenditure was revalidated by a number of studies thereafter. Gerdtham et al. (2000) used a single cross section data of nineteen OECD countries and found that per capita income, urbanisation, and the share of public financing to total health expenditure as factors influencing significantly the health expenditures. Gbesemete and Gerdtham, (1992) used a cross sectional data of 38 African countries for their analysis. They found that per capita GNP was the most
significant factor in explaining per capita health care expenditure. A number of studies tried to examine cointegration between health expenditures and income and did not find any results in favour of the argument (Gerdtham and Lothgren, 2000). Per-capita income defined as per-capita GDP of countries is found to have played a major factor in explaining the differences in the level and growth of health expenditures across many countries. Regression results for a cross section of OECD countries consistently yielded an income elasticity of more than one, ranging from 1.20 to 1.50 when regressed against per-capita health expenditure (Kleiman, 1974).

Public expenditure on health has been the focus of many research studies, but few of these studies have concentrated on private expenditure on health. According to Wagner hypothesis, the economic growth causes the public expenditure, while the Keynesian view is that the public expenditure causes economic growth. A study by Selvaraju, et.al (2001) analysed health expenditure data till 1996 and found that there was a period of contraction of expenditure. But after the contraction period, again the situation improved and then that expenditure contraction period ended. A study by Bhat and Jain (2004) examined the relationship between income and health expenditure. For every one percent increase in state per capita income, the per capita public healthcare expenditure has increased by around 0.68 per cent in Indian States. Joshi (2006) in her study on spending by Indian states found that public expenditure incurred on health as a percentage of GDP declined in the post-reform period in India. A study by Berman and Ahuja (2008) using medical and public health and family
welfare components estimated that health expenditure as a percentage of GDP and health expenditure in total government expenditure in India declined significantly during 1999-00 to 2004-05. It is evident that not only public expenditure on health care in India was too low at 1.1 percent of GDP during 2010-11 and but also is unevenly distributed across the states. Tulasidhar and Sarma (1993) made a comparative study of different states in India with respect to public expenditure, medical care at birth and infant mortality and found that per-capita health expenditures grew faster in states with higher per-capita income.

Prabhu and Chatterjee (1993) examined the impact of government expenditures on the levels of health, education and nutrition attainment for 15 major states in India during 1974-75 to 1991-92. They found that generally states with low attainment levels were the ones with low per capita expenditure but ranking of states with respect to attainment levels and infrastructural development did not reveal a similar clear relationship. Filmer and Pritchett (1999) used cross-national data of 98 developing countries to examine the impact of both public spending on health and non-health factors in determining infant and under-five mortality. They found that public spending has a small and insignificant impact on infant and under-five mortality. They concluded that 95 per cent variation in mortality across countries has been explained by country’s per capita income, inequality of income distribution, extent of female education, level of ethnic fragmentation, and predominant religion.
Duraisamy (2001) found that household income emerged as a key determinant of health status and education has a negative impact on the measures of morbidity. Kaur and Mishra (2003) examined the level and effectiveness of social sector expenditure in the field of health and education covering 15 states over the period 1985-86 to 2000-01. They found that relationship between public spending and health outcome turns out to be weaker while per capita income is relatively more important vis-à-vis state spending in influencing health outcome, and infrastructure availability seems to have a significant influence in reducing infant mortality. Economic Research Foundation (2006) conducted a benchmark study on government health spending in India and linked them to observed health outcomes. The study found that there was no exact correlation between per capita health spending and some basic health indicators such as life expectancy, infant mortality rate and under-5 mortality rate but immunisation coverage appeared to be directly affected by public health spending in four states such as Gujarat, Maharashtra, Orissa and Punjab.

Berman and Ahuja (2008) analysed the trends in government health expenditure prior to and following the launch of the National Rural Health Mission. They found that government health spending was declining prior to 2004 but this trend clearly reversed since 2005 primarily through increased allocations by the central government under the National Rural Health Mission (NRHM). Guruswamy, et.al. (2008) observed the important characteristics of government healthcare financing and examined the interrelationship between the pace of economic development, in terms of growth in GDP and public
expenditure on health at the state level. They concluded that relatively less developed or poorer states are found to be spending more on health per capita and as a proportion of GSDP compared to developed or richer states. Haldar (2008) studied the relationship between IMR, health expenditure and economic growth in a bi-variate framework using Granger causality method at the state level, using longitudinal data for 26 years from 1980-81 to 2005-06 and found that a long run relationship exist between IMR and health expenditure particularly in the states of Bihar, Madhya Pradesh, Rajasthan, Haryana, Karnataka and Uttar Pradesh.

Jain (2010) examined the impact of economic reforms on infant mortality rate and life expectancy at birth and found female literacy rate, cropped land and basic amenities to be the important variables in explaining variations in health poverty. Dutta (2013) analysed the human development achievement and improvement indices of Indian states during 1981-2011 in order to see how achievement level of Indian states progressed or deteriorated over time. The study found wide variations in the ranking of states in terms of achievement and improvement indices.

Recent initiatives in the form of National Rural Health Mission (2005), has been designed to improve access to healthcare services, particularly for the rural population. Rashtriya Swasthya BimaYojana (2008), which is a government run health insurance scheme for the poor extends a cashless insurance for hospitalization in public as well empanelled private hospitals.
The health system performance is very vital for improving health of the population. In India, most of the health expenditure is supported by private spending, primarily out-of-pocket (OOP), which occurs when an individual pays for healthcare services, which may or may not be reimbursed. In India, with public fund constituting an insufficient amount, this results in catastrophic out-of-pocket health spending by household. Catastrophic spending occurs when household spends above certain level of threshold, which leads to deprivation in present consumption of necessary goods and services, leaving households impoverished in other aspects of living standards. The World Bank participatory poverty study in fifty countries found that poor health and illness are universally dreaded as source of destitution, not only because of the cost of health care but also because of income lost. The study documents the case of 30 year old Indian mother of four who was forced to sell the family’s home and land and must walk 10 km a day transporting wood on her head in order to finance the cost of her diabetic husband’s medical care (Narayan, 2000). It is observed that the burden of ill health is borne disproportionately by different population subgroups and that people of lower socio-economic strata consistently experience poor health outcomes.

In India over the years private health sector has grown markedly. The private health sector is the most unregulated sector in India. The quantum of health services the private sector provides is large but is of poor and uneven quality. Another relevant aspect borne out by several field studies is that private health services are significantly more expensive than public health services. Cost
of outpatient services have been found to be 20 to 54 percent higher and inpatient services 107 to 740 percent higher (MoHFW 2005). Out of pocket expenditures are the major source health care and it accounts for 83 percent health care expenses in India (Duggal, 2007). India’s relatively unaccountable and inefficient public healthcare system has led to the evolution of highly varied, unregulated and mostly expensive private sector that provides most healthcare, rendering Indians increasingly vulnerable to catastrophic health expenditures and poverty (Pal, 2010).

India which accounts for one in four of under five deaths, one in three of the poor and one in six of the population in the world, on account of its size it has the highest child death toll in the world, 2.4 million under five deaths (Black et al, 2003). In India 5.6% of household had to finance OOP healthcare expenditure by taking loans (Ladusingh and Pandey, 2013). Emanuel et al (2000) have found that for patients needing substantial care spent nearly 10 percent of their household income on healthcare. These families had to cope with loans, second mortgage or take an additional job. Payne et al (2009) in a study in Canada found that during 1991 to 2001, the ratio of decedent to survivor cost have increased for all age groups, and were greatest for hospital and continuing care costs. About one quarter of medicine out lays are for last year of life and it remains unchanged from 20 years ago (Hogan et al, 2001).

Out-of-pocket spending is largely involuntary and does not contribute to household wellbeing in the way that spending on any other good would. A household unfortunate enough to have to pay for medical care, is deprived of its
present consumption which may include necessities like food, shelter and other necessities. Out-of-pocket (OOP) payments are the principal source of healthcare finance in the less developed countries and India is no exception. This fact has important consequences for households’ living standards. In India, health sector reforms have been piecemeal and incremental but have led to extensive changes in the organization, structure and delivery of healthcare services and financing. In Bangladesh, a study carried out in Dhaka, Desmet found that health expenditure caused household to moderately reduce food items that were not necessities while protecting staple food items (Desmet, 2000). In addition, relocating to another residence due to health expenditure constituted only two percent of household who moved. Education expenditure was not reduced while clothing expenditure decreased in the lowest income quintile and for those with the highest health expenditure level.

With increasing public expenditure on health, it is important to understand the pattern of health care utilization services. India’s social structure is highly divided on various caste and religious lines which in turn determine the social capital of household. In this scenario access to health care services becomes important and it should be based on the need rather than the willingness to pay or ability to pay. Proponents of private resource mobilization argue that individuals are willing to pay for medical care and additional financing will allow government to expand and improve crucial programs. (World Bank, 1987). Opponents argue that the poor are unable to pay for medical care and will be worse off if government expands private resource mobilization. Optimal
policy for healthcare should be based on the benefit that the policy would have for society above and beyond what would have happened in the absence of public intervention. The benefit of any public policy is to the extent to which it ameliorates individual and social losses from private market failures. Priorities should be based not only on the effectiveness of the policy, but also importance government places on the type of losses and the individuals who incur those losses. Sometimes policies are not responsive to the dynamic needs of the changing demographics and social structure and a segment of population is completely neglected due to this apathy. A study by Burholt and Windle, in research for the Joseph Rowntree Foundation (2006) attempted to compare the financial resources of different groups of older people and to discover which groups of people were most vulnerable to poverty. Unsurprisingly, those groups who were vulnerable to poverty in youth were more likely than others to be poor in old age. However, there is a more unwelcome side to poverty in old age. Many younger people move in and out of poverty.

In India, accelerated demographic transition has not been accompanied by a corresponding epidemiological transition from communicable diseases to NCDs, as observed, (Agrawal and Arokiasamy, 2010). Older people who, become poor remain poor and can do little about the position that they find themselves in. They suffer multiple deprivations as they are vulnerable to loneliness and disability. Generally these people are uneducated, living in poor areas, female and in poor health. Often they are widowed or separated. It is those people who have to survive on state pensions rather than occupational pensions
who have the poorest experience of old age. Public financing of health care in this aspect is critically important for welfare of the society as a whole and article 47 of our constitution which says that “it is duty of the State to raise the level of nutrition and the standard of living and to improve public health The State shall regard the raising of the level of nutrition and the standard of living of its people and the improvement of public health as among its primary duties and, in particular, the State shall endeavour to bring about prohibition of the consumption except for medicinal purposes of intoxicating drinks and of drugs which are injurious to health”. Public financing of healthcare can be considered as provision of public good, since 29.8% of the population still lives below poverty line in India (Planning Commission, 2012). Programs for medical research, health promotion, vector control and food and water safety. Such goods provide benefits that are shared by many people irrespective of their socioeconomic status and whether they pay for them. It has been documented that when there is large scale inequality in spending on health, there is sure to be problem with public health of nation. The needs of health care vary across age structure of the population. Health is a component of wellbeing, so that if health were affected by income inequality, tax and transfer policies that affect the distribution of income would have effect that work. If expenditure on health has a linear effect on overall public health and redistribution of income exists, then it is certain that it would improve the health of the poor population. People who spend less on health are generally poor and this vicious cycle of health and poverty continues.
In literature from OECD countries, cross-section regressions of aggregate health expenditure per capita on GDP per capita consistently showed an income elasticity significantly above one, from about 1.20 to 1.50 (Kleiman 1974; Newhouse 1977; Leu 1986; Getzen 2000). Aggregate time-series regressions for individual countries most often showed similar results although with considerable variation between countries. Similarly, in global literature, Musgrove, Zeramdini and Carrin used cross section data from 191 countries in 1997 and found that income elasticity of health expenditure was between 1.133 and 1.275 depending on the data included. Income elasticity for OOP ranged from 0.884 to 1.033 while it was between 1.069 to 1.194 for government health expenditure (Musgrove et al. 2002). Another study by Gaag and Stimac using cross section data from a 175 countries in 2004 found that income elasticity for health expenditure was 1.09. They also presented the results by geographical region and found that income elasticity ranged from 0.830 in the Middle East to 1.197 in OECD countries. Murthy and Okunade used cross-sectional data in 2001 from 44 African countries and found an income elasticity between 1.089 and 1.121, depending on the specification used (van der Gaag and Stimac 2008). Schieber and Maeda used cross section data in 1994 estimated global income elasticity at 1.13 and found higher income elasticity for public spending than for private spending (Schieber and Maeda 1999).

The availability of panel data has made it possible to estimate panel data models for different time periods. Several studies in OECD countries using panel data found the income elasticity was larger than one which is in line with
previous results based on cross section data (Gerdtham, Sogaard, et al. 1992). However, this result is sensitive to the choice of the underlying assumptions of the model. Under additional assumptions, some authors obtained income elasticity close to one (Hitiris and Posnett 1992).

Literature using panel data model from non-OECD has not directly looked at the relationship between income and health expenditure. However, Lu et al looked at the effects of official development (ODA) on health spending using data from 1995 to 2006 in low and low middle income countries and found that GDP per capita had no significant relationship with government health expenditure as a share of GDP (Lu et al. 2010). Another study by Farag et al, examining the fungibility of ODA for health and domestic government health expenditure based on panel data from 1995 to 2006 for a 144 countries, found that a 1% increase in GDP was associated with 0.66% increase in domestic government health expenditure in low-income countries and 0.96% increase in middle-income countries (Farag et al. 2009).

More recently, Baltagi and Moscone (Badi H. Baltagi and Moscone, 2010) studied the long-run economic relationship between health expenditure and income in 20 OECD countries over the period 1971–2004. The analysis indicated that health care expenditure and most of its determinants were non-stationary, and that they were linked in the long-run. Their results showed that health care elasticity with respect to income was about 0.87 which was much smaller than that estimated in other OECD studies.
Population age structure is often included as a covariate in health expenditure regressions. Commonly used indicators are the share of young (e.g., under 15 years) and old people (e.g., above 65 or 75 years) over the active or total population. These variables are generally insignificant when included in regression models explaining per-capita health spending (Leu 1986; Leu 1986; Hitiris Posnett, 1992; L. Di Matteo and R. Di Matteo, 1998). Epidemiological need is sometimes also incorporated as a covariate through various proxies. Lu et al used HIV sero prevalence as a proxy and found that it had no significant relationship with general government health expenditure as a share of GDP (Lu et al. 2010). Murthy and Okunade found that maternal mortality rate had no relationship with health expenditure in African countries (Murthy and A. Okunade, 2009).

The studies reviewed above clearly reveal that income defined as gross domestic product of a country plays a vital role in determining the health expenditures of governments. While household out of pocket expenditures continue to dominate the health care expenditures in countries such as India. The share of public expenditures have been low and risk pooling such as insurance mechanism have not evolved to mitigate the burden on households.