EQUITY OF HEALTH SECTOR FINANCING AND DELIVERY IN INDIA

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Abstract

This paper describes the financing and delivery of health care in India from viewpoint of equity. In this context typical financing mixes of public and private sources are examined. Inequity in delivery of health care is analyzed on the basis of utilization of health services by people in different income quintiles, and in different geographical locations on the basis of self-reported ill health. The paper shows that even though the government sources of financing are mildly progressive, the large proportions spent by the household on health care makes it overall regressive. Both government and private expenditures are higher for higher income quintiles and for people living in urban areas and working in organized sector. On the other hand, people in lower income quintile and in rural areas bear higher burden of health expenditure as a proportion of their income. Delivery of health care is also found to be biased in favor of urban areas.

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INTRODUCTION

India is the seventh largest country in the world in area and second largest in population with an estimated 950 million in 1997. Twenty seven percent of its population lives in the urban areas whereas rest of the 73 percent lives in the rural areas. About 30 percent of the population are below the poverty line with a higher percentage in the rural areas. India features to be a low-income country with a GNP of $290 billion and GNP per capita to be around $310 in 1996. It has been experiencing an average annual growth rate of around 6.5 percent over last 5 years in its GNP. However, only 390 million people are employed in the economy with just 44 million being employed in the manufacturing sector and less than one fourth of these being employed in the organized manufacturing sector (Government of India, 1997, 1998).

Health and human development, in addition to per capita incomes, form integral part of overall socio-economic development of a nation. In order to achieve distributive justice, the Government of India has shown strong commitment to the development of social sectors. Over the past five decades, the government has been making concerted efforts to improve the health status both in rural and urban areas. The Government announced the Common Minimum Program in June 1996 and particularly, in the health sector, the strategy of ‘Health for All’ set by the policy makers twenty years ago in the Alma Ata is being reoriented towards ‘Health for Under Privileged’ (Government of India, 1997).

The health system in India has considerably improved during the past five decades with the spread and accessibility of modern medicine and considerable improvements in two important indicators of health status i) the life expectancy at birth and ii) infant mortality rates. However, compared with other developing countries, the health status in India is not only below the level for all developing countries but has also shown a lower level of improvement. The life expectancy at birth in 1993 was 60.7 for India which is below 61.5 for all developing countries, and infant mortality rate for the same period was 81 which is much higher than 70 for all developing countries. At the same time, the percentage decrease in infant mortality rate in 1993 over 1960 was 51 per cent in case of India against 71 per cent in China, 76 percent in Sri Lanka and 82 percent in Malaysia (UNDP, 1996)

The health status in India is low despite a significant amount of resources spent on health as compared with similar income countries. According to the World Development Report (1993), India spent 6 percent of its GDP or about $17,750 millions on health in 1990 which is larger than the expenditures in China, Sri Lanka and Indonesia (not only in absolute terms but also per capita terms) but achieved a lower health status as compared to these countries.

Several reasons have been identified in the literature (Berman 1995,1997; Tulasidhar 1990, 1996; Reddy 1994, 1994a; and Shariff 1995) for the problems that India's health care system faces. These vary from misallocation of resources to inefficiencies in delivery system. The health problems in India are aggravated by high incidence of infectious and communicable diseases on one hand and modern diseases like cancer and AIDS on the other hand. The former is generally associated with malnutrition, unhygienic sanitation, illiteracy, and ignorance. Further, rapid growth of population and significant number of people below the poverty line, and large rural and urban unorganized sectors makes it even more difficult for health services to keep pace with health needs. Financial burden on consumers also arises

from the fact that drugs and medical technology have become expensive. With inadequate management of public facilities consumers are forced to visit private facilities and incur large out of pocket expenditure for care that could otherwise have been available at no or little cost at government facilities.

The major objective of this paper is to study the financing of health care system from the viewpoint of equity. Equity in health care can be examined with respect to i) equity in health care finance and ii) equity in the delivery of health care. While former deals with the impact that health care financing and delivery arrangements have on distribution of *income*, the latter deals with the impact that health care and financing arrangements have on distribution of health care *utilization* (Doorslaer and Wagstaff, 1998).

In India, since financing of health is done from both private and public sources, the progressivity of health care financing in public sector will have to be assessed for different financing sources like direct tax, indirect tax, local tax, social insurance premiums and for private payments like direct payments for fees and medicines or private insurance premiums. In order to understand the redistributive effect, it is not only important to understand the financing mix, that is the relative shares of taxes, social and private insurance premiums and direct payments, but also find out to what degree a financing scheme is horizontally or vertically equitable.[1]

Keeping in view the data availability, in this paper we plan to assess the equity of health care mainly from the viewpoint of financing from the public sources and delivery from utilization perspective. It is difficult to assess the redistributive effect of private payments which make up about three-fourth of the total health care financing. The equity of their payments is discussed more in terms of their utilization of health care services and payments made for curative care and on medicines.

[1] Vertical version of ability to pay equity principle is seen as payments increasing with increasing incomes (unequal treatments of unequals), while the horizontal version requires households with same ability to pay make similar payments.

The paper is organized in three major sections i) financing of health care ii) provision or delivery of services, and iii) utilization of services. The paper finally discusses the main findings and conclusion.

Data Sources

The paper mainly uses secondary data sources. Data on tax and non-tax revenues of the government are available from the Ministry of Finance, Government of India documents. However, not much information is available on the incidence of taxes and, therefore, the statements on the progressivity of direct taxes are made on the basis of tax structure that exists. For redistributive effect of indirect taxes, use of a recent study by P. Agarwal (1997) for data relating to 1988-89 was made.

The data for State and Government expenditures on health were compiled from the state budget documents. The data used are for 1993-94. The reason for choosing this year was mainly because the latest available household data for health care is for 1993-94 based on the National Council of Applied Economic Research (NCAER) household survey. The data used from this survey are based either on personal communications or on published paper by Shariff (1995). Some of the utilization data are also used from the National Family Health Survey conducted by International Institute for Population Studies, Bombay for 1992-93.

The data on health infrastructure is available from the Health Information of India, an annual report published annually by the Ministry of Health and Family Welfare, Government of India.

The data on insurance is collected from the Annual reports of the Employee State Insurance Corporation (ESIS), Annual reports of the Central Government Health

Services (CGHS), and from personal communications with General Insurance Corporation (GIC).

1. FINANCING OF HEALTH CARE

Health care system in India is pluralistic in nature with financing and provision done by both government and private sector. The government agencies include various departments of central, state, union territories and local governments and various pubic sector enterprises, which provide health care through public hospitals or by reimbursing for treatment in private facilities for certain sections of the population. These are financed through tax and non-tax revenues of the government or through revenues of the public enterprises. The government acts as an agent for social insurance and also partly finances social insurance schemes available to certain sections of employees. Private providers include private hospitals, clinics and pharmaceutical companies which are financed through fee for service; private and social insurance financed through individual or company premiums; and certain charitable institutions financed from donations and contributions from both government and private households. A detailed break up of these agencies, how they provide and finance health care and who are the beneficiaries is given in table A.1.

Public Sector Health Expenditures: Source, Composition, and Allocation

Source:

Government agencies like central ministry of health, state departments of health, and municipal governments finance health care through funds arising from tax and non tax revenues, fees, contributions from employees and assistance from international agencies. Since receipts from these sources are put in the consolidated funds and are used for several activities of the government, it is difficult to say how much from each of these sources is channeled into health care. The mix of health care taxes can be taken to mirror the mix of general tax revenues. According to WDR (1993), only 0.5 percent of

health expenditures comes from the external sources and hence revenue receipts comprising tax and non tax revenues, and capital receipts form major sources of public sector health care financing. The structure of tax and non-tax revenues is presented in table 2.

Tax Revenues: Tax revenues are raised by both central and state governments with two-thirds of the tax revenues raised by the central government. Direct taxes make up about 28 percent (or 3 percent of the gross domestic product) whereas indirect taxes make up about 72 percent of gross tax revenues (or 7.4 percent of GDP) of the central government. The direct taxes comprise income tax, which is about 13 percent and approximately 15 percent comes from corporate tax. Corporate taxes are based on the book profits of the company and rates are fixed. The infrastructure sector is exempted from these taxes as they are assumed to have positive impact on development of the country. Personal income taxes are progressive in nature with tax rates varying from 20 percent in the lowest tax bracket to 40 percent in the highest tax bracket (Currently the rates vary from 10 percent in the lowest bracket to 30 percent in the highest bracket. The distribution of income tax can be seen to be progressive for people paying taxes. Table 3 shows tax payable per return as well as the ratio of tax payable to gross income rises as income rises. The major components of indirect taxes are customs and excise duties where customs duty account for 34 percent and excise duties account for about 38 percent of gross tax revenues. The general conception is that indirect taxes are borne by one and all and hence they tend to be regressive in nature. However, to the extent that items of mass consumption like oils, most food items, paper supplied to state book corporations, etc. are exempted from excise duties, the poorer have to bear lesser burden. Agarwal (1997) finds the distribution of burden of major indirect taxes (individually and combined) to be progressive in rural as well as urban areas with higher progressivity in rural areas than in urban areas (Tables A.4 and A.4a).

States on their own raise only a third of the total tax and non-tax revenues collected in the country. As against this, their share of total public health spending is

about 70 percent (World Bank 1997). Financing of health expenditure at state level arises from three sources i) State's own non-plan budgets ii) State's own plan budgets and iii) budget of centrally sponsored programs. States depend on shared taxes from central government revenue and central government's specific and general-purpose grants and loans. The major source of states own tax revenue is from sales tax (approximately 60 percent) and rest of it comes from land revenues, from stamps and registration, state excise, from taxes on vehicle, passenger goods, etc.

Non Tax Revenue: Non tax revenues make up less than one-fifth of the total revenue receipts of the central and state governments. The non tax component of central government revenues comprise donations and grants from individual and corporations into various national funds and for state and local governments these are contribution and grants mainly from the higher level governments. Other sources of states own non-tax revenues are income from schools, hospitals and other institutions like trusts, endowment etc., gifts and contribution, fine and penalties, income from other social and economic services, forestry, industry etc.

An important component of non tax revenues from health services are user fees for use of public facilities, though the extent of resources raised through this mechanism is very small. The average cost recovery for medical, public health and family welfare services is only about 5 percent of government health expenditures. The current cost recovery is based on partial fee-for-service, contribution from government employees and voluntary payments. Free services are available in general wards in government hospitals and clinics and for certain preventive and promotive services but partial fees is charged for people availing of paying or special ward facilities. Most people have to pay for drugs, laboratory tests, blood etc. Part of the revenue receipts for the government also arises from sale of sera, vaccine and contraceptives, license fees, fines under drug control, etc.

Capital receipts: Besides the revenue receipts from both tax and non tax sources, the government also receives money from market borrowing, recoveries of loans, provident funds, deposit schemes of government etc. Capital receipts account for about a third of total government receipts.

As mentioned earlier, one can get an idea of what proportion of government receipts come from various sources, but it is not possible to say how much revenues from each source are used for various health activities. Based on 1993-94 government health expenditures, roughly 3 percent of all government receipts are used for health expenditures. Srivastava and Sen (1997) estimate 6 percent of all subsidies by the government are used for medical and family welfare activities.

Composition:

Government spending on health care is less than one-third of the total public sector health expenditures. Government expenditures to improve health also include government's investment on water and sanitation, nutrition programs, etc. However, for all practical purposes only those elements of health expenditures are considered which are used to directly control and prevent diseases and to reduce fertility. These are classified under three major heads of the health budgets of the center and state governments: medical, public health and family welfare. The 'medical head' which has the most curative component of health care expenditure comprises expenditure on hospitals and dispensaries, insurance schemes, medical education and training and expenditure on other system of medicines. They account for 60 percent of health expenditures. On the other hand, expenditure on preventive care obtained by summing public health and family welfare component account for only 26 per cent of expenditures. These include expenditure on prevention and control of diseases; prevention of food adulteration, drug control, minimum needs program, urban and rural family planning services, and maternity and child health. Further 5 percent is spent on direction and administration and the remaining 9 percent is spent on other miscellaneous services (Reddy and Selvaraju 1994). As preventive services carry with

them higher externalities and have relatively higher benefits for the poor as compared to the curative services, one can say that higher allocation to curative services may not benefit the poor as much as it may benefit the rich.

Further, about 97 percent of the public expenditure are used for consumption expenditure and only 3 percent go toward capital expenditure (buildings, machinery and equipment). Out of the consumption expenditure 60 percent is used for wages and salaries and only 35 percent for material and supplies, drugs, and transport, hence representing misallocation of resources. Non availability of drugs and equipment is one of the reasons for low quality of service and lack of demand for public services in the rural areas.

Allocation of public resources

Government financing of health care include variety of health services such as curative care in government hospitals and clinics, public health services like disease control programs, ante natal care, development of medical education, family welfare programs to control fertility, and insurance scheme for low salaried corporate workers and central government employees. Further, government also spends on health services for employees of certain state owned enterprises like defense, most of the public sector employees and employees of the autonomous bodies. Many of the non-governmental organizations (NGOs) also depend on government for financing most of their health activities.

Role of Central and State Governments: Though the major finances for states come from the center, it is primarily the state's responsibility to provide health care. Health expenditures on hospitals, primary health care facilities and insurance are almost entirely financed from the states' budgets. Family planning, maternal and child health and immunization are almost entirely in the central government budget. The expenditures on public health programs and education and training are more evenly distributed between the center and the state budgets. The center provides two-thirds of

the plan expenditure and plays a major role in capital spending. Funds in states own budget are mainly non-plan and are committed expenditure used for operating costs of existing structure.[2] To this extent there is limited flexibility in expenditure pattern in states' budgets and this leads to the problem of inefficiency in public health facilities.

Allocation of health expenditure between states: Table 5 shows states that incur higher per capita health expenditures have lower infant mortality rates (IMR). However, IMR are not related to per capita SDP of the states. Those states which have higher per capita income can provide more expenditures for health care not only from their own budget but also the central allocation of grants have favored them. Instead of funding on the basis of the individual needs of the states, it is found that some of the communicable disease programs like malaria eradication are funded on the basis of 50-50 cost sharing from the central and state budgets. However, the north-eastern states mostly inhabited by the tribal population obtain 100 percent central assistance. It is also found that expenditure compression programs of the central government because of the structural adjustment program tend to hit the poorer states more. Tulasidhar (1993) finds that there has been a continuous decline in the share of central grants in the state's health sector expenditure. This is found to have a greater impact on the relatively poorer states as compared to middle income and rich states. Further, the greatest impact in the poorer states is on their expenditure on public health. This tends to adversely affect the poor in these states.

Allocation of health expenditures between rural and urban: Besides the problem of allocation between the center and states and between different states, there also seem to be mis-allocation of resources between the rural and urban areas. Even though rural areas account for 73 percent of the population only 33 percent of government health resources have gone to the rural areas. In terms of per capita allocations, urban population received more than 5 times what the rural population received. This has led

[2] Plan budget refers to all expenditures current (recurrent) and capital incurred on programs and schemes initiated during the current five-year plan. The expenditure, generally recurrent associated with continuation of activity after the plan period refers to non-plan budget.

to wide disparity in the health status indicators, as seen by infant mortality rates, which were 51 in urban areas as compared to 79 in rural areas in 1994. For 1993-94, it can be seen based on table 5 that 40 percent of medical and family welfare resources went to the rural areas. However, from the expenditure on medical services, which mostly stand for curative care, only 32 percent went to rural areas. Such allocations of public resources does not appear to be equitable, let alone progressive given that 73 percent of the population and majority of those below the poverty line live in the rural areas.

Social Insurance Schemes

Insurance agencies are the most important financial intermediaries who mobilise funds from the employers, employees, government and households and help to finance high cost of treatment in time of need. Government financing of health insurance schemes involve the Employee State Insurance Scheme (ESIS) for employees of the organized sector earning less than Rs. 6000/- per month (approximately $150) and the Central Government Health Scheme (CGHS) for government employees. Both these social insurance schemes are principally financed by the contributions of beneficiaries and their employers and from taxes. In the ESI scheme, the employers contribute 4 per cent of the wages payable to the coverable employees and the employees contribute 1.5 per cent of their wages towards the scheme. Employees up to the average daily wage of Rs. 15 are not required to contribute; the employers, however, contribute their share in respect of such employees also. The state governments contribute 12.5 per cent of the total expenditure on medical care under ESIS in their respective states.

The central government health scheme covers over 4 million central government employees along with their families and other entitled persons, like employees of certain autonomous organizations, retired central government employees, widows of central government employees in receipt of family pension, MPs and Ex-MPs, ex-governors, ex-vice presidents, retired judges of Supreme Court and High Courts, freedom fighters and members of general public (in 14 specified areas in Delhi) and certain universities. Most of the expenditure of the CGHS is met by the Government of India, Ministry of Health and Family Welfare. A very small amount of premium is

payable by the members for the services they avail and is calculated on the basis of their basic pay in case of central government employees. So far as other members are concerned, the amount of premium is fixed according to the salary drawn by the employee. Those enrolled in these schemes can take advantage of special facilities made available to the members and generally enjoy a much higher level of health expenditure than is available from government services to general public. Similar schemes exist for state government employees which are mainly financed by state departments of health.

Though there have been no known studies to show premium payments by different socio-economic groups, it can be said that the ESIS scheme which is largely for lower income employees working in the organized sector, benefits mainly the second, third and to some extent the fourth income quintiles. The CGHS and similar state government schemes is basically for the government employees, and it covers all income quintiles of the society. Though the relative proportion of people benefitting from these social insurance schemes are not available for different income quintiles, they mostly serve the urban population.

Private financing of health care

Household expenditure:

According to the World Development Report, out of the 6 percent of GDP spent on health, private sector accounts for 4.7 percent or 78.5 per cent of the total health expenditures of which 4.5 per cent is out of pocket expenditure and the rest 0.2 percent comprise contribution by private employers and employees. These out of pocket expenditures come from disposable incomes of the household and are used for paying doctor's fee, hospitalization bill or for buying drugs at hospitals or pharmacies. Sanyal (1996) shows that a significant proportion of household expenditure (approximately 20 per cent) is used for complimentary expenses like travel costs, food, stay, bribes which are not directly used for payment for the services. Both micro level surveys (for example by Duggal and Amin 1989) and macro level surveys by NSSO for 1987-88 and

NCAER for1993-94 show that poor spend less on medical care as compared to the prevalence level of illness found against them (Table 6). This is in spite of the fact that poor spend about 7 to 8 per cent of their annual household income on health care where as rich spend only about 2 to 3 percent of their incomes on the heath care.[3] Further poor spend a significant proportion on transport, second only to practitioners fee and medicine, while the richest spend more on hospitals and surgery after practitioners fee and medicine.

There are no sound estimates to show the composition of household expenditure between medical, public health and family welfare. The best estimates available from World Bank (1995) show that most of the expenditure by the households go towards curative services. Even for the primary services (which are supposedly free in widespread government facilities) 82 percent of the expenditures come from the households. On the preventive and public health component, households spend only about 27 percent of the total expenditure. Berman (1997) estimates that 65 percent of the out-of-pocket expenditure in rural areas and 61 percent in the urban areas goes toward non-hospital treatment. Of these the major share is spent on private non-hospital treatment as the corresponding figures for out-of-pocket spending for private non-hospital treatment in rural and urban areas are 56 percent and 52 percent respectively.

Similar picture emerges by looking at the NCAER data for 1993-94 given in tables 6 and 7. Though the average annual household expenditures and cost of treatment per episode for both outpatients and inpatients are higher in urban areas, the expenditure as a percentage of income is higher in rural areas. This shows people in the rural areas bear a greater burden of health expenditures as compared to people in the urban areas.

[3] 63.4 percent of lowest income people in rural areas spend 7.8 percent of their incomes on health care as compared to 2.3 percent by top 5 percent of rural population. In urban areas, bottom 37 percent spend 7.1 per cent of their income on health care as compared to 2.9 percent by top 14 percent. (Based on tables from Shariff, 1995)

Financing by employers:

Though the WDR estimates the private employer share of total health expenditure to be only 1.2 percent, the estimates given by Reddy (1994) are higher at about 8 percent. Private organized sector employees earning below a certain salary have to be mandatorily covered by their employers under the Employee State Insurance Scheme (discussed later) unless they provide better medical benefits than ESIS. Besides ESIS, corporate sector finances health care for its employees under four basic categories.

i) Group Health Insurance Scheme (GHIP): In this scheme a company negotiates an insurance policy, to cover the employees and their families for hospitalization and other medical expenses with various benefit limits. The amount of premium depends upon the volume of insurance business that the company offers and the number of employees. The premium could be paid by the employer or shared between employee and employer according to different class of employees or it could be related to employees monthly salary.

Insurance companies provide indemnity cover to the employees such that the cost of medical care is borne by the insurance company, through reimbursement. The insurance company reimburses to the insured staff member/dependants reasonable expenses, subject to certain maximum limits which they have incurred on account of hospitalization and domiciliary treatment. Most companies have their insurance plan with either of the four subsidiaries of General Insurance Corporation (GIC) or sometimes directly with the hospitals also.

ii) Reimbursement of Actual Expenses: Under this scheme, a company reimburses the actual medical expenses incurred by its employees. Some companies set an upper limit that can be claimed by an employee in a financial year according to his basic salary, while some meet the medical expenses of their employees on the production of vouchers verified by recognized hospitals and panel doctors without any

limitation. In some cases, costs are shared by employees also. A few employers provide for reimbursement of travel expenses for medical care and some also provide free medical check-ups for their employees.

iii) Fixed Medical Allowance/ Lump Sum Payment: A company may pay a fixed amount monthly or annually as medical allowance to its employees irrespective of actual expenses, but mostly based on salaries.

iv) In-House Medical Facilities: There are a few companies which finance their well-equipped, self-sufficient hospital services for their employees from their own revenues or partly from employees contribution . Some companies have their own dispensaries at various locations and employees can consult doctors and also get their medicines from these dispensaries. For hospitalization, employees can get admitted in any of the hospitals approved by the company. Plantations is one sector which provides in-house hospital facilities to its 1.6 million employees absolutely free of cost. A three-tier medical set-up provides primary care at dispensaries manned by paramedical personnel, secondary care at Garden Hospitals where there is a doctor as well as inpatient facilities and in a few cases, tertiary care at a referral group hospital where specialists services could be obtained. Having own hospital or clinic is generally economical for those companies, which have larger employee strength.

All the above mentioned schemes are not mutually exclusive. In fact, companies use them in combination. The average and high profit making and productive companies mostly have non-ESI medical benefits, whereas low profit making groups have a tendency towards providing only statutory benefits. Some employers also provide post-retirement health plans. The pattern of financing medical benefits for the workers is more or less same in both the public and the private sector. So far as combinations of types of medical benefits provided to employees is concerned, in the pubic sector, ESIS and claims, and hospital clinic and claims are the main combinations. In the private sector, ESIS and claims is the most important combination

followed by group insurance and claims and own hospital/clinic and claims. The system of lump sum payment is least common among both private and public sector companies (Duggal 1993).

Private financing of health care through health insurance

Health insurance schemes for individuals and corporations are available through the General Insurance Corporation (GIC) of India and its subsidiaries- a public sector monopoly. These schemes are financed from household's disposable incomes and corporate funds. The major schemes available are MEDICLAIM scheme for the individuals, Group Health Insurance Policies for the large groups, and the Jan Arogya scheme for the poor. Basically GIC provides indemnity cover for major surgical and hospitalization costs. Till now, this line of business has had only limited success, covering only 1.7 million people, paying a total premium of about Rs. 1 billion and per capita premium of Rs. 600 in 1995-96. The claim premium ratio is about 65 percent implying substantial potential for improvement of scheme.

A large number of conditions on pre-existing diseases and indemnity nature of insurance should make it particularly unattractive to middle and lower income groups. It is however interesting to note the MEDICLAIM coverage by income categories does not really reflect this. In a study done by UNDP (personal communication with GIC) for a sample of 45205 policyholders, nearly 68 percent belonged to the income group of less than Rs. 2500 per month. As we move towards the upper income groups the percentage of policyholders decline progressively. This may be because the higher income people who have the economic stability can bear the health risks and do not prefer to opt for MEDICLAIM policy. Further, it was found that irrespective of the income categories, most people preferred to buy category I policy which had both the highest benefits as well as the highest premiums. Hence, people who insure themselves are the ones who like to be covered well against the health risks. Also the policies were more popular with the people in the urban areas, males and people in age bands 21-55 year.

The Jan Arogya policy mostly aimed at covering poor people has also been quite popular with about 265 thousand people being enrolled and paying a premium of Rs. 18 million between August 1996 (time since the policy was launched) to February 1997.

The above analysis shows that private insurance premiums are borne more by the people belonging to relatively lower income than the higher income people. Also, it is mostly borne by the people in the urban areas.

2. PROVISION

Just as financing of health care is mixed, the provision of health care is also done through both public and private sectors. Health care is provided through a number of hospitals and dispensaries located at different places. Table 8 provides the broad overview of the health infrastructure in the country.

Table 8 shows that in terms of number of hospitals and dispensaries, private and voluntary organizations dominated (57 per cent), and in terms of bed strength, government sector dominated (64 per cent). It has been found that for much of the in-patient care, government is the provider of health care. According to NCAER survey, about 61 percent of the hospitalized cases in the rural sector were treated in the public hospitals and about 39 per cent in the private hospitals. The corresponding figures for urban sector were almost the same at 60 per cent and 40 per cent respectively (Table 7). In terms of percent of total illness episodes one finds on the basis of Table 4 of Berman (1997), that 82 percent in rural areas and 79 per cent in urban areas go to private providers for primary care. Further, health care is delivered through a number of government aided and ‘not for profit’ hospitals through grants and concessions from government, particularly for the family planning and preventive health care services which are of national importance. But, the magnitude and quality of such help is not adequate.

It is not only in terms of the ownership and utilization of the facilities that one finds disparities, rural urban inequalities in health infrastructure also exists. The urban sector dominated not only in terms of registered allopathic doctors mostly unwilling to work in the rural areas, but even in terms of hospitals and beds only 32 percent of all hospitals and 22 percent of all beds are in rural areas. With 73 percent of population in rural areas, the disparities in terms of facilities per person become even more marked.

Government Provision of Health Services

At the government level, health services are available to all through public financed and managed health service infrastructure. These are available free of charge or on payment of some very nominal fee.

*Rural Health Services***:**

In view of the goal "Health for All by the year 2000 AD" coordinated efforts are being made under various rural health programs to provide effective and efficient services to the individuals living there. These include sub-center for providing health care for every 5000 population in general and for every 3000 in hilly, tribal and backward areas; One Primary Health Center (PHC) for every 30,000 population in the plain areas and for every 20,000 population in hilly, tribal and backward areas; and a Community Health Centers (CHC) for every 80,000 to 120,000 of population so as to serve as a referral institution for four PHCs, having a minimum of 30 beds and 4 specialists. CHCs mainly provide specialized curative services in gynecology, pediatrics, surgery and medicine. PHCs provide all ambulatory illness treatment services, routine personal preventive care such as ante-natal visits, well baby check-ups, immunization and other personal disease; maternity care on an out-patient basis; and public health and vector control measures. It includes personal curative services but doesn't include treatment as an inpatient in a hospital. All these facilities are organized in a hierarchy for management and referral purposes. However, down to the

sub center and village health guide level substantial multi-functionality is expected and they are in fact designated as multi-function workers.

In spite of these facilities, several gaps remain. First, several of the sanctioned posts remain unfilled and there is acute shortage of staff in rural public health facilities. A large percentage of government health expenditures at district level are spent on salaries and only a small percentage is spent on drugs and supplies, and transport and maintenance. Several studies show that people in the rural areas are dissatisfied with the services. They have to walk a long distance to the PHC only to find that the doctor is not available. Even if the doctor is available and gives the prescription, they have to travel another few kilometers to get the medicines. All medicines, especially antibiotics, are generally found to be in short supply. Emergency equipment and life saving drugs such as oxygen and steroids are not available in a large number of PHCs. Long waiting hours and unsympathetic attitude of the staff were other reasons for patient dissatisfaction. Hence, for most of the ambulatory care people preferred private practitioners, vaids, hakims (traditional healers) and other traditional system of medicine like homeopathy, unani, ayurvedic and siddha. Berman (1997) shows that 82 percent of illness episodes in rural areas and 79 percent in urban areas went to private providers.

Urban health services

More than one quarter of the population now lives in the urban areas. Large-scale migration from rural areas in the past decade has led to the growth of slums in these areas. There has been no concerted effort by the government to provide services to this section of the population. Most urban areas have mostly large-scale secondary and tertiary facilities provided by the government. Services at government dispensaries and clinics are generally available to certain sections of the population. Hospital facilities, which should be available only for referred inpatient care, are significantly used for outpatient care also. People who can afford can obtain best quality care at

some of these facilities and those who cannot have to wait in long queues or depend on out of pocket payment for private care. A large urban informal sector basically gets covered under this latter category.

It has been noted in some studies that some of the public providers who work on fixed salaries at government hospitals supplement their incomes by doing private practice after hours. The extent of ‘moonlighting' is, however, unknown.

Social Health Insurance Schemes

It has been mentioned earlier that the two social insurance schemes where central and state governments make contributions are the Central Government Health Scheme (CGHS) and Employees State Insurance Scheme (ESIS). Whereas Government wholly provides the services for CGHS employees, the ESIS is a public sector corporation, which has its own clinics and dispensaries.

Employees State Insurance Scheme (ESIS): provides both cash and medical benefits to its members. The ESIS offers three types of medical benefits-full, expanded and restricted medical care. Full medical care covers outpatient treatment, specialist consultation and hospitalization for the insured person and his family members. Expanded care does not cover hospitalization, and restricted care covers only outpatient treatment. However, there is no difference in premium rates between these three types of coverage. The package of benefits operative in an area simply depends on the level of coverage facilities available. Broadly, there are seven types of coverage available to each insured person namely, medical benefit, sickness benefit, maternity benefit, disablement benefit, dependants benefit, funeral expenses and rehabilitation allowance. Apart from medical benefit, a majority of other benefits are actually cash benefits to compensate for the wages lost due to medical reasons.

The number of factories and establishments covered under the scheme, as on 31st March 1996 were 190,944 units and the total numbers of employees covered were

6,613,400. The total number of centers, where the scheme had been implemented was 629. (ESIS 1995-96).

Central Government Health Scheme (CGHS): The facilities under the scheme include out-patients care provided through a network of allopathic and ayurvedic/homeopathic/unani dispensaries, supply of medicines, laboratory and x-ray investigations, domiciliary visits, emergency treatment, ante-natal care, confinement and post-natal care, advice on family welfare, specialists consultations and hospitalization facilities in government hospitals as well as in private hospitals recognized under CGHS. As on 31st March 1995 there were 235 allopathic dispensaries, 10 poly-clinics, 31 ayurvedic dispensaries/units, 34 homeopathic dispensaries/units and 3 yoga centers, 2 siddha dispensaries and 8 unani dispensaries in the cities where the scheme is in operation (CGHS, 1994-95). All drugs prescribed by the medical officers or specialists are provided free of cost from CGHS dispensaries. Free domiciliary visits are also made by the medical officers as and when required. Similarly, hospitalization facilities are provided through a chain of central and state government hospitals, municipal hospitals and also some approved private hospitals. Moreover, all government hospitals such as army, navy, railways, ESI and state government/municipal hospitals are recognized under CGHS. The central government pensioners are able to avail of the CGHS facilities from their nearest dispensary irrespective of the fact whether they are residing within the jurisdiction of the scheme or not.

Provision in State Owned Enterprises:

Many state-owned enterprises like Indian railways, mines, telecommunications, posts and defense offer in-house hospital facility to its employees. Generally, expenses for running in-house hospitals are met by these enterprises from their own budgets, however, some financing comes from employees and government also.

The Armed Forces Medical Services (AFMS) are responsible for providing comprehensive health care to serving personnel, their families and dependants numbering approximately 5.3 million. Besides, ex-servicemen and their families numbering approximately 13.5 million are also entitled for treatment. AFMS have network of 127 hospitals of varying sizes and facilities throughout the country. While the peripheral hospitals have basic specialist facilities, the eight command/army hospitals have super specialist centers. For outpatient treatment there are dispensaries in every cantonment area (inhabited by defense personnel).

Indian railways have a network of 122 railway hospitals and 670 health units, which render medical services to serving, 1.6 million employees and their families and also to, retired railway employees and their families. There are dispensaries for outpatient treatment in every railway colony. About 82,000 patients daily attend the outpatient departments. Besides, Indian Railways have a staff benefit fund, and dispensaries under the indigenous systems of medicine, (viz. ayurvedic and homeopathic) are run with the help of this fund.

Provision in Universities/Autonomous Bodies

Health care provision in different universities and autonomous bodies may vary and the variation may also be within the same institution for different employees. However, the system of provision for these institutes is closer to the government set up or to public sector organizations. While most universities have their own clinics for out-patient treatments some even provide facilities for hospitalization for minor operations. In some cities some of the universities/autonomous bodies employees are also allowed to CGHS facilities. Many of the universities and autonomous institutions also allow their employees to take treatment from panel doctors and then reimburse the amount so incurred on the treatment. Hospitalization is allowed subject to limits for various surgeries mostly at recognized hospitals only. Reimbursements are made subject to a limit on production of medical vouchers duly verified by panel doctors or recognized hospitals.

Private Sector Provision

Berman (1997) has proposed that private care provision can be characterized with three dimensions: Financial orientation (for-profit, not for profit etc.), therapeutic orientation (allopathic, ayurveda, homeopathy etc.) and complexity of organization (informal, part time to large specialty centers). In case of India all these dimensions exist. Further, most of the allopathic providers are also categorized according to level of services they provide like primary care, diagnostic, dental, opthalmological, general and specialist. Information on most of the informal provision by both traditional and modern providers is very limited even though it is generally believed and accepted that they play a significant role.

In the private sector, broadly speaking, health care is provided through individual physicians, dispensaries and clinics, charitable (not-for-profit) private hospitals; and private (for-profit) nursing homes and corporate hospitals. Dispensaries and the clinics are run by individual physicians (or by group of physicians) who provide health care on fee-for-service basis and for profit in different lines of medicine like allopathy, homeopathy, ayurveda etc. These traditional systems of medicines are legally recognized by the government for which both training and services are offered by the government. Charitable hospitals are run by trusts and some provide out-patient health care free of any charges while some other provide on fee-for-service basis but without profit motive; nevertheless to the extent they want to expand the services available to the people, the price they charge would be much higher than what it costs to them. Private corporate hospitals, registered under Indian Companies Act are owned by shareholders and are run like any other private limited company. Their motive is profit and operates on fee-for-service basis. They could also be offering their services for a premium paid to them directly or through medical insurance companies. These corporations like Apollo Hospitals and Enterprises Ltd. (AHEL), Hinduja National Hospital, Surlux Diagnostic center, Escorts Heart Institute etc. are large urban-based

hospitals or diagnostic centers which offer the latest medical technology. Their services may range from diagnostic services to medical care.

Even though there is still a larger majority of population who depend on public services for inpatient care, the rapid expansion of these large corporate hospitals has been aided by direct and indirect support from the government. This has been in the form of subsidies, tax exemptions and trained medical staff. Many corporate owned hospitals also receive government grants for a fixed number of hospital beds to treat indigent patients. This sector has also successfully secured finance from commercial institutes. But the unregulated growth of this sector has further escalated the unequal distribution of health provision in the country. Since, these are typically concentrated in urban areas, it increases the already skewed distribution of health resources between urban and rural areas.

To get a better picture of health care provided by private sector, an in-depth study of providers is needed. It has been noted from most of the household surveys that when individuals fall ill, a majority of them seek care from private rather than public providers for outpatient care. Berman (1997) also report on the basis of the study by Rohde and Vishwanathan (1996) that there are large numbers of (over 80 percent of providers in rural areas) less than fully qualified (LTFQ) practitioners who combine variety of therapeutic system. Even though LTFQ practice is not now legal their easy accessibility, convenient hours, relatively low cost, and addressibility to major public health problems make them quite popular with the rural population.

Role of NGOs

NGOs are generally considered to be not-for-profit non-governmental organizations that act as financiers as they are able to raise some revenues through user fees, contributions and donations from private individuals, companies and charitable institutions. These funds are managed by NGOs who also provide health

services mostly at the local level. NGOs are believed to understand needs of community and are considered more innovative and flexible in their approaches. Government plays an important part in raising funds for NGOs by giving income tax concessions for donations made to various funds like National Illness Assistance Fund, funds established by state governments to finance medical care to the poor, donations to various charitable institutions, etc.

An excellent review of NGO involvement in provision of health services was undertaken by Ford Foundation (1994) under the Anubhav project. The health services among the NGOs vary from provision of maternal, child health and family planning services by Streehitkarini, Bombay, hospital services, control of communicable diseases and medical education by KEM hospital, Pune, services through own hospitals and clinics by comprehensive health and development project, Aurangabad, Child in Need Institute, West Bengal, Voluntary Health Services (VHS), Tamil Nadu, Society for Education Welfare and Action (SEWA), Gujarat and many others.

Some NGOs like VHS Tamil Nadu introduced the concept of pre-payment and provide coverage not only for the sickness insurance, but covers wide range of health activities viz. maintenance of family records, mother and child care, immunization, nutrition, family welfare, control of communicable diseases especially leprosy, tuberculosis, malaria, filaria and water borne diseases. SEWA also organizes health insurance, security of work and income, and food security for women workers. It helps to build strong links with local doctors as well as municipal hospitals thus strengthening referral services for SEWA members. It also runs its own maternity benefit scheme, which includes pre-natal and post-natal care including health education, tetanus toxoid immunization and a small cash component for emergency expenses and extra nutrition.

NGOs are important in Indian context as they provide valuable services especially in the rural areas and to the poor people of the society. Government has realized the complimentarity of their services and has been encouraging them in

various plans. It is difficult to estimate their actual impact but they have still not made a significant impact in reducing the curative care expenses for primary care.

3. UTILIZATION OF HEALTH SERVICES

From the sections above, one can see that there is wide disparity in both financing and provision of health services. Further, rural-urban and socio-economic differences are also observed in utilization of health services. It has been indicated earlier that data in respect of utilization were collected by NCAER for 1993-94. The data were collected for 6354 rural and 12339 urban households across the country for one-month recall period during May-June 1993. Data were collected on morbidity, health care utilization and health expenditures for treated episodes in hospitals and non-hospitals and also for untreated illness episodes. Some of these data are presented in tables 6,7, 9, 10 and 11. Data on utilization of ante-natal care services, immunization services and utilization of delivery services have been used from NFHS survey done by IIPS, Bombay for 88562 households (2/3 rural) for 1992-93.

Utilization by type of treatment

Tables 6 and 8 show that despite higher morbidity in rural areas and among females, the percentage of episodes treated are higher in urban areas and for males as compared to rural areas and females. On an average 11% of the episodes reported ill do not resort to treatment. However, the proportion of untreated declines as one moves to higher income quintiles and more so in the highest income quintile bringing the influence of income and education. Of the total episodes treated 93 per cent use outpatient facilities and only 7 per cent use in-patient facilities. Further, one observes that there is no trend or pattern in utilization of outpatient services for rural areas and only marginally increases with income quintiles in the urban areas. In both rural and urban areas the use of inpatient services increases with income quintiles and more so in rural areas. Only 6 percent get treated as inpatients in lower income quintiles as

compared to 11 percent in the upper income quintiles. This may be because of the higher capacity of higher income quintiles to pay for costly hospital treatment.

Utilization by Type of Provider

Though the use of private facilities is higher for outpatient treatment, for in-patient treatment there is greater reliance on the public facilities in both rural and urban areas. For outpatient treatment, the percentage people using public facilities in rural areas is higher compared to urban areas but the differential is not significant in case of in-patient treatment. Further table 10 shows that there is greater utilization of public provided services in lower income quintiles as compared to people in the upper income quintiles. The use of public facilities for inpatient treatment decline sharply between first and second income quintiles for both rural and urban areas after which there is no change in rural areas but declines further in urban areas. This implies that higher income people in urban areas prefer to go to private hospitals as they perceive that by paying money they can get better treatment at private facilities.

Utilization of Services for Preventive Care

The rural-urban differentials in utilization of services can also be seen in terms of percentage of children in age 12-23 months who received vaccinations. Out of a sample of 9,138 children in rural areas and 2,715 in urban areas, 51 per cent children in urban areas had received all vaccinations (BCG, Measles, DPT and Polio) as compared to only 31 per cent in rural areas. Further, 16 per cent in urban areas and 34 per cent in rural areas had received no vaccinations at all (IIPS 1995).

As regards utilization of antenatal care (ANC) during pregnancy, one finds that for 38 percent of the births mothers did not receive any antenatal care during pregnancy. Utilization of ANC services were better in urban areas than in rural areas with 81 per cent of births receiving antenatal care in urban areas as compared to only 57 per cent in rural areas. In urban areas about 77 per cent received treatment from an allopathic doctor and other health professionals as against 41 per cent in rural areas. Rural women are more likely to rely on health workers at home. (IIPS 1995).

Rural-urban disparities also exist for percentage of live births by place of delivery and assistance received during delivery. While 83 per cent of deliveries were home deliveries in rural areas, there was a higher percentage (58 per cent) of institutional deliveries in urban areas. Further, 74 per cent of deliveries in rural areas are done either by traditional birth attendants or relative/friends whereas the relative figure in urban areas is 34 per cent (IIPS 1995).

Differentials in Allocation of Household Expenditures

Just as differences in utilization of services exists according to place of residence and income quintiles, differentials can also be seen in average expenditures incurred by different income quintiles and by people in rural and urban areas.

Data on household expenditures on curative health care available from the NCAER 1993 survey indicates a clear increasing trend in both rural and urban areas with increasing household income but as a percentage of household income spent on curative care, there is a reverse pattern (table 6). This is inspite of the fact that there is a greater morbidity prevalence rate both in rural and urban areas in lowest income category. As observed earlier this is because higher income people tend to use more private facilities whereas lower income people rely on public facilities to a greater extent. Alternatively they use cheaper system of medicine.

As shown in table 11 the average expenditure on medicines by the rural outpatients increased sharply from Rs. 69 by those in first income quintile to Rs. 92 by patients in second quintile. Again it rose from Rs. 78 for patients in fourth quintile to Rs. 107 by those in the fifth quintile. A large decline by those in the third quintile and then a little increase in the forth quintile is not clear and needs further probing. For urban outpatients, there is a sharp fall in average expenditures on medicines between first and second quintile after which it increases monotonically. The expenditure by rural inpatients on medicines does not indicate any pattern with income. But in urban areas

there is gradual increase in expenditure from Rs. 258 in lowest quintile to Rs. 715 in fourth quintile, after which it falls to Rs. 546 in top quintile.

It is note worthy that rural patients in first quintile spend two and a half times the amount on medicines than urban inpatients in the same income quintile. Moreover, it was double the amount spent by people in second income quintile and two and a half times those in third quintile. Though no clear reason could be attributed to this pattern, a plausible explanation could be that rural inpatients in first quintile go in for hospitalization only when the patient's condition becomes really serious implying greater expenditure including that on medicines. Alternatively, higher expenditures on medicines may also be due to non availability of essential drugs to the poor in government run facilities, especially in the rural areas, forcing them to buy from the market on one hand and inability of the lowest quintile to give up their daily wages for going to distant urban public providers on the other hand.

On the basis of above, one can conclude that though higher morbidity prevails in rural areas and in lower income quintile, utilization of services and quality of services utilized in rural areas and among the lower income quintiles are poorer as compared to people in urban areas and higher income quintiles. Further, poor have to bear a greater burden as a proportion of their income spent on health care.

MAIN FINDINGS AND CONCLUSION

Even though India spends 6 percent of its GDP on health care, more than 70 percent of it comes from private sources out of which most of it is out of pocket expenditures spent by the people in rural areas.

From the viewpoint of public expenditure it has been found that even though both direct and indirect taxes are progressive in nature but in terms of government allocation of resources, rural areas have been neglected as most of the government expenditures have flowed to non-rural areas. Further the government expenditure between the preventive and curative services again tend to favor the urban and the

richer groups. The allocation of government expenditure and provision between the center and the state tend to be biased in favor of better off states, which affects the poor in the poorer states adversely. Health care delivery has also been biased against the unorganized sector and particularly the urban poor.

It has been found that even though the government has been making concerted efforts to improve the health infrastructure in rural areas, the extent, level and quality of services are still very poor. Even though more people live in rural areas, more hospitals and health personnel serve the urban areas.

Even in terms of utilization of services, one finds that though there is higher prevalence of morbidity in rural areas and for females as compared to urban areas for same income categories, the quality and access to treatment is much poorer in rural areas. Higher percentage of episodes remains untreated in rural areas as compared to urban areas. There is higher immunization of children in urban areas and more urban women get antenatal care. Rural women rely more on traditional health workers.

Further, there is higher utilization of in-patient facilities in higher income quintiles. Larger numbers of people in rural areas and among lower income quintiles utilize public providers especially for out patient treatment. Use of public facilities declines with the increase in incomes especially for in-patient treatment. However, rural patients spend more on medicines than urban patients in the same income quintiles. Further lower income quintiles have higher average expenditure on medicine than those do in higher income quintiles. Average household expenditure increases with the increase in household income in both rural and urban areas, but in terms of percentage of their income spent on health care there is a higher burden on poor and those in rural areas.

From the above findings one can conclude that although there is progressivity in public sources of finance, but in terms of government expenditures there is a bias in terms of allocation against the poor, the rural areas, and urban organized sector. The private sources are found to be regressive with lower income people spending higher proportion of their incomes on health care and medicines. Finally we can say that the

health care system as a whole is not effective especially in terms of nations resources devoted to health care vis-à-vis its impact on the health status or provision of health care services and facilities equitably.

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Table 1

Health Care Provision and Health Care Financing in India

Health Care Provision	Health Care Provided Through	Health Care Beneficiaries	Health Care Financing
A. GOVERNMENT AGENCIES			
1. Government Administration			
Central, State, Union Territory and Local Governments	1. Public hospitals 2. DHCs, CHCs, PHCs SCs, etc.	All people (Rationing by queue); but mostly poor and weaker sections	Tax and non-tax receipts, capital receipts deficit financing, foreign aid, gifts, and fees for services rendered
Public Enterprises and Autonomous Institutions (Fully or Partially Funded by Government	1. Hospitals owned by them 2. Reimbursement for treatment obtained in private hospitals	Restricted to their employees	Profits, grants from governments, gifts, fees for services rendered
2. Social Insurance			
CGHS	CGHS clinics, government hospitals and some private hospitals	Restricted mainly to Central government employees and others	Employees' contribution and Central government revenues
ESIS	ESIS hospitals and dispensaries	Restricted to workers registered with ESIC, drawing below Rs. 6,000 per month	Employee, employer and government contributions
B. Non-Government Agencies			
1. Private hospitals	Owned hospitals by individuals/groups of individuals	Open to all	Fees for the services (Households)
2. Private dispensaries	Owned hospitals by individuals/groups of individuals	Open to all	Fees for the services (Households)
3. Physician consultants	Owned consultancy clinics and private hospitals	Open to all	Fees for the services (Households)
4. Charitable hospitals/ research labs	Hospitals owned by individuals/ trusts/ philanthropists	Open to all	Contributions from philanthropists / fees the services on no profit basis (Households)
5. Private corporations (Joint Stock Companies)	Hospitals owned by them and reimbursements	Restricted to their employees	Profits, tax concessions, grants from government, and fees

6. Private corporate hospitals	Owned hospitals	Open to all	Fees for the services (Households)
7. General insurance **Medical insurance**	Public hospitals/ private hospitals/ corporate hospitals Physician and consultants	Open to all	Premiums from insurers (Households, corporations, institutions)
8. Native doctors such as Vaida, Hakims, Tantrics, Naturopaths, etc.	Owned clinics	Open to all	Fees for the services (Households)
9. Pharmaceutical companies/ surgical and opthalmological equipment manufacturing companies, etc.	Medical stores and dispensing chemists/ hospitals (private and public)	Open to all	Fees for services and/ or supply of goods in question (Households)

Key of words used in the table
DHC – District Health Centers
CHC – Community Health Centers
PHC – Primary Health Centers
SC – Sub Centers
CGHS – Central Government Health Scheme
ESIS – Employee State Insurance Scheme

Table 2

Revenue and Capital Receipts of Center and State Governments

	1993-94	1996-97
a. Total tax revenues (C+S) (Rs.	1219.6	2049.46
1. Tax Revenue (Center)	**62.1**	
1.1 Direct tax	25.3	
Income tax	12.0	
Corporate tax	13.3	
1.2 Indirect tax	71.1	
Union Excise	41.8	
Customs	29.3	
1.3 Other direct and indirect taxes @	3.6	
2. Tax revenue (States)		**35.6**
Sales tax		61.5
State Excise		12.2
Others*		26.3
Center tax revenue (net of states share) Rs.	534.5	973.1
Center non tax revenue	220.0	
States non tax revenue (incl. Grants)	306.4	
	128.8	
B. Capital Receipts (Rs. Billion)		646.2

Source: Indian Public Finance Statistics, Ministry of Finance, Government of India

Reserve Bank of India Bulletin, Government of India

@ Other direct and indirect taxes mainly include interest tax, expenditure tax, wealth tax, gift tax, service

* Others include taxes like land revenue, stamps and registration, taxes on vehicles, passengers & goods, etc.

Table 3
Distribution of Income Tax Payers by Returned Income: 1992-93

Rs. Thousands

Range of returned Income	Number of Returns	Gross Income	Income Returned	Tax Payable	Tax Payable/ Return	Tax Payable/ Gross Income
<28		9485980	6693677		2.98	0.098
	2671326	103077605		12538532	4.69	
50-100	2017421		148587823	18169264		0.118
100-200		30957605	26896501		49.49	0.296
	46392	13510306		4173328	89.96	
300-400	26893		9231792	3465913		0.285
400-500		10616701	7973601		172.79	0.274
	8191	10038932		2669291	325.88	
1000+	11718		71127271	35007993		0.267
TOTAL		474,366,848	390,074,511		16.81	0.188

Table 4
Combined Effective Rates and Progressivity of Major Indirect Taxes by 5 Expenditure Classes: 1988 - 89

Serial Number	Monthly per capita expenditure class	All Commodities		
	(Rs.)	Rural	Urban	Combined
	1	2	3	4
1	<100	9.81	10.25	9.85
2	110 - 160	10.27	10.82	10.36
3	160 - 215	10.94	11.21	11.00
4	215 - 385	11.74	11.78	11.75
5	above 385	13.75	13.45	13.59
6	All classes	11.21	12.15	11.51

Table A.4a
Effective Rates and Progressivity of some of the Major Indirect Taxes by 5 Expenditure Classes : 1988 - 89

Percent

Monthly per capita expenditure class	Customs Duty			Excise Duty			Sales Tax		
(Rs.)	Rural	Urban	All	Rural	Urban	All	Rural	Urban	All
	1	2	3	4	5	6	7	8	9
<100	1.49	1.53	1.5	3.4	3.63	3.43	4.82	5	4.84
110 - 160	1.55	1.56	1.55	3.63	4.01	3.69	4.99	5.15	5.01
160 - 215	1.64	1.64	1.64	3.99	4.2	4.04	5.19	5.26	5.2
215 - 385	1.83	1.78	1.81	4.39	4.51	4.43	5.35	5.36	5.35
above 385	2.39	2.21	2.3	5.07	5.36	5.22	6.07	5.71	5.88
All classes	1.75	1.87	1.79	4.06	4.7	4.26	5.26	5.44	5.32

Source: P. Agarwal (1997)

Notes: The data correspond to the second survey of the annual series of the NSSO: 44th round (July 1988-June 1989)

Table 5
Center and State Government Expenditure on Health Year: 1993-94

(Rs. million)

	Andhra Pradesh	Bihar	Gujarat	Haryana	Karnataka	Kerala	Madhya Pradesh	Maharash-tra	Orrisa	Punjab	Rajasthan	Tamil Nadu	Uttar Pradesh	West Bengal	All States	Center
Medical and Public Health																
Urban Health Services	1962.5	998.7	1100.5	240.8	1132.0	1246.8	1422.0	2157.6	502.8	734.8	1279.6	2118.6	2427.7	2584.8	19909.2	3310.3
Rural Health Services	647.7	1248.4	621.9	348.0	45.5	504.1	945.3	213.4	530.8	717.5	1064.3	809.1	2553.2	845.1	11094.4	155.4
Medical Edu., Training & Research	369.3	267.6	341.3	244.2	360.3	411.1	297.2	704.5	157.6	221.0	384.6	712.9	848.9	372.9	5693.2	3285.6
Public Health	975.8	375.9	656.5	204.4	310.2	231.6	708.4	2728.3	288.1	231.6	402.7	804.5	1573.0	639.8	10130.9	1075.8
General	33.7	215.9	9.3	8.0	1331.8	0.7	2.5	94.4	15.2	41.5	0.0	98.3	8.4	8.4	1867.9	83.8
Total	3988.9	3106.5	2729.5	1045.3	3179.8	2394.4	3375.4	5898.2	1494.4	1946.4	3131.2	4543.5	7411.2	4451.1	48695.8	7910.9
Family Welfare																
Rural Family Welfare Services	567.1	568.4	328.8	80.7	10.3	354.2	281.7	196.2	159.5	109.4	338.5	421.6	1058.8	439.7	4914.9	6.8
Urban Family Welfare Services	25.4	2.1	26.9	14.0	19.3	3.0	32.4	55.3	10.3	19.1	23.7	190.4	63.6	11.2	496.8	15.3
Maternity and Child Health	108.2	27.8	18.9	30.3	71.4	46.3	17.0	179.3	11.1	34.9	136.7	128.8	335.6	5.7	1151.9	23.8
Selected Area Program	89.3	0.0	0.0	39.2	125.2	81.5	0.0	130.2	0.0	3.9	0.0	13.4	167.2	263.1	913.1	6.6
Others	230.6	146.5	192.0	89.0	475.0	90.1	340.7	315.0	218.4	203.0	244.3	230.4	824.3	84.1	3683.4	924.8
Total	1020.6	744.8	566.6	253.1	701.3	575.2	671.8	876.1	399.3	370.4	743.3	984.5	2449.5	803.8	11160.1	977.3
Medical, Public Health and Family Welfare Expenditure	5009.5	3851.2	3296.0	1298.4	3881.0	2969.6	4047.2	6774.2	1893.8	2316.7	3874.5	5528.1	9860.7	5254.8	59855.9	8888.2
Population	68.7	89	43	17.3	46.7	29.8	69.3	81.9	32.7	21.1	46.2	57.3	145.9	70.6	857.1	
Per Capita Health Expenditures	72.9	43.3	76.7	75.1	83.1	99.7	58.4	82.7	57.9	109.8	83.9	96.5	67.6	74.4	69.8	
Infant Mortality Rates	64	70	58	66	67	13	106	50	110	55	82	56	94	58	74	
Per capita SDP	6742.1	3750.8	7650.2	10437.6	7050.7	6321.1	5521.1	11136.5	4799.4	12323.2	5256.5	7355.5	4737.5	6170.3	6215.1	
Health expenditure as % of SDP	1.08	1.15	1.00	0.72	1.18	1.58	1.06	0.74	1.21	0.89	1.60	1.31	1.43	1.21	1.12	

Source: Budget Documents, Various States, Government of India
Figures on IMR are based on Sample Registration Bulletin, Registrar General, India, Vol. 32, No. 1, January 1998
Figures for Center are for year 1994-95

TABLE 6

Household Expenditure On Curative Health Care and Morbidity Prevalence Rate according to Household Income and Place of Residence

Household Income Group (Rs.)	Average Annual Household Income (Rs.)	Average Annual Household Health Expenditure (Rs)	Expenditure as Percentage of Income	Morbidity prevalence rate @
Rural				
18000 and less	10946	855.84	7.82	103
18001-54000	29033	1195.44	4.12	98*
54001 +	76039	1722.33	2.27	99*
Total	**18716**	**988.40**	**5.28**	**101**
Urban				
18000 and less	12832	908.18	7.08	98
18001-54000	32147	1352.33	4.21	88*
54001 +	78504	2313.20	2.95	85*
Total	**430184**	**1294.09**	**4.29**	**91**
Total				
18000 and less	11303	865.75	7.66	102
18001-54000	30233	1255.93	4.15	94*
54001 +	77431	2055.84	2.66	92*
Total	**21931**	**1074.10**	**4.90**	**99**

Source: Shariff (1995)

Note: Estimates are based on the expenditure incurred by the households during the one month reference period for the treatment of illnesses.

@ Morbidity prevalence rate is per 1000 population per month.

Figures are based on the family size with 5-7 members.

Figures were available with further break up of income categories. Average figures were calculated to fit with the income categories given for household expenditures.

Table 7

Utilization of Health Services and Costs of Treatment

	Rural	Urban	Combined
MPR/1000 popn./month	104	101	103
Males	102	96	101
Females	105	106	105
% episodes not treated	11.8	8.3	10.9
% episodes treated(**OP**)			92.7
Public	41.6	33.8	
Private	58.4	66.2	
% episodes treated**(IP**)			7.3
Public	60.7	59.8	
Private	39.3	40.2	
cost of OP tr./episode(Rs)			
Public	51	65	
Private	123	141	
All	93	115	
cost of IP tr./episode(Rs)			
Public	559	452	
Private	1876	2336	
All	1076	1210	
Medical Exp. (h-holds)	150	242	208
Total Health Exp. (Hh)	194	278	248
Per Capita Annual Health Expenditure			
Govt.			84
Household			250
Total			334

Source: From Health Care Financing and Insurance: Perspective for the Ninth Plan (1997-2002) by A. Shariff, A. Gumber, R. Duggal, and M. Alam
Forthcoming Economic and Political Weekly, 1998

Table 8
Health Infrastructure by Place of Residence and Ownership: 1993

	Place of residence			Ownership				
	Rural	Urban	Total	Government	Local bodies	Private and voluntary	Total	Per 100,000 popn.
Hospital	4310	9382	13692	4235	344	9113	13692	1.6@
Beds	122109	474094	596203	365696	19520	210987	596203	70
Dispensary	11080	16323	27403	8377	1758	17268	27403	3.3*
Beds	13000	12173	25173	13241	1336	10596	25173	
Doctors	25961	372367	398328	39466	-	-	-	47.2*
Paramedics	275015	36220	311235	-	-	-	-	36.9

Source: Health Information of India. Central Bureau of Health Intelligence, Ministry of Health and family welfare, Government of India, (1994)

* Figures are for 1991

\- Data not available

@ The rural urban break up is 1:5

Table 9
Percentage Distribution of Illnesses by Type of Treatment: All India

Sex/Age/Education/Income Quintile	Rural Areas			Urban Areas			All Areas		
	Untreated	patient	In-	Untreated	patient	In-	Untreated	patient	In-
Male		80.2	7.8		81.3	11.2		80.4	8.7
Female	11.6		5.2	9.0		7.6	10.9		5.9
1		81.1	5.4		81.1	8.8		81.1	5.9
2	10.0		7.8	9.4		8.3	9.9		7.9
	11.2	82.3		7.1	82.4		9.7	82.4	
4		80.8	7.6		83.0	9.7		81.7	8.5
5	7.3		10.5	6.2		10.6	6.7		10.6

(personal communication)

Table 10
Percentage Share of Public Provider by Income Quintile: All India

Sex/Income Quintile	Rural Areas		Urban Areas		All Areas	
	Out patient	In patient	Out patient	In patient	Out patient	In patient
Male	40.3	64.2	34.7	59.9	38.9	62.8
Female	43.0	54.8	32.9	59.6	40.2	56.5
1	43.5	68.6	40.5	82.0	43.0	71.5
2	42.1	55.6	36.8	68.9	40.9	58.8
3	39.3	59.4	35.6	56.5	38.0	58.0
4	35.3	49.7	28.0	46.3	32.0	48.0
5	35.9	55.2	22.6	37.6	28.4	45.2
All	41.6	60.7	33.8	59.8	39.6	60.4

From NCAER 1993 survey (personal communication)

Percentage of Treated Patients who had Reported Expenditure on Medicine by Income Quintile: All India

Income	Rural Areas		Urban Areas			
	% Reported	Av. Exp.		Av. Exp.	% Reported	
Outpatient						
1	43.1	69	46.0	91	43.5	73
3	51.9	70	58.5	81	54.3	74
4	58.0	78	63.7	83	60.6	80
All	48.0	78	56.3	86	50.2	81
Inpatient						
2	80.4	356	64.4	343	76.5	354
3	65.0	265	68.7	535	66.8	396
5	85.9	436	76.2	546	80.4	495
All	75.8	487	71.2	476	74.2	483

From NCAER 1993 survey (personal communication)