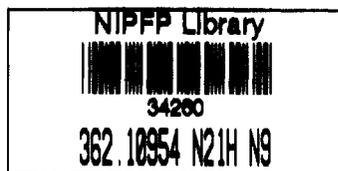


HEALTH CARE STATUS IN INDIA



National Institute of Public Finance and Policy
New Delhi

Preface

The National Institute of Public Finance and Policy (NIPFP) is an autonomous non-profit organisation established for carrying out research, undertaking consultancy work and imparting training in the fields of public finance and policy.

In June 1990, the NIPFP with financial support from the Ford Foundation set up a research unit to study 'Health Economics and Financing in India'. The major research concerns in the Health Economics Unit, since then, have been the problems of financing public health expenditure in India in the light of its persistent low health status. The present studies—the final outputs of the unit—are a set of five studies, of which one is devoted to a database on health expenditure of four states of India. Focused mainly on health and environment, these studies examine various aspects of public health care scenarios in the central, state, and union territory levels, as also in some selected countries of the world.

The titles of the studies are:

1. Health and Environment
2. Health Care Status in India.
3. Health Care Systems in India.
4. Health Care Financing Practices in Selected Countries.
5. Database on Health Expenditure: Four Selected States, Volume I and Volume II

The first study was planned and conducted by A.L. Nagar. He was assisted by Harmeet Singh Maddh, Sharmistha Mukherjee, Anindita Chakroborty, Tauhidur Rehman, Rajeev Kumar Singh and Vikram Singh. The studies at 2, 3 and 4 were undertaken by Charu C. Garg, Harmeet Singh Maddh, Ranita Datta and V. Selvaraju. The database is the outcome of an effort made by Charu C. Garg and V. Selvaraju.

The members of the Governing Body of the Institute are not be responsible for the views expressed in these reports. That responsibility belongs to the authors.

June 1999

Ashok K. Lahiri
Director

HEALTH CARE STATUS IN INDIA

Health and human development form integral components of the overall socio-economic development of a nation. Measured in terms of the two most widely used indicators of health status that is, (i) life expectancy at birth, and (ii) infant mortality rate, the health status in India has considerably improved over time. However, it is not a matter to be proud of when compared with other developing countries. For example, during 1960 and 1993, life expectancy at birth in India increased by only 38 per cent as against 46 per cent in China, 53 per cent in Indonesia and 34 per cent in all developing countries. Infant mortality rate decreased by 51 per cent in India as against 71 per cent in China, 76 per cent in Sri Lanka, 65 per cent in Thailand, 82 per cent in Malaysia (being the lowest in developing countries at 13). Health status in India is not only below that of many developing countries taken individually but also below that of all developing countries taken together (table 1.1).

India records an average per capita annual income of about Rs 6200 (US \$ 350), placing it in the middle range of low-income countries. For a country with this level of income, India spends a relatively significant amount on health care, that is, 6 per cent of the GDP but gets a poor return in terms of health improvement (table 1.2). Further, as compared to other countries barring a few developed nations, the total health expenditure in India is fairly high at \$17,750 million in 1990. Other countries, such as China, Indonesia, Sri Lanka and Malaysia which spend a smaller amount on health (not only in absolute terms but also in per capita terms) are found to have a better health status in terms of infant mortality rates and life expectancy.

WHAT AILS OUR HEALTH CARE SYSTEM

Misallocation of resources

There seems to be a misallocation of health resources in various fields: (a) public and private sectors, (b) curative and preventive services, (c) consumption/current and capital expenditure, and (d) plan and non-plan expenditure.

Allocation between the public and private sectors

In terms of allocation of health expenditure between the public and private sectors, several estimates have been provided. According to the World Development Report (WDR) (1993), it is found that out of the 6 per cent of GDP spent on health care in 1990, the private sector accounted for as much as 4.7 per cent (out of which 4.5 per cent was out-of-pocket expenditure of the households). The rest of 0.2 per cent was contributed by private employers and by other non-government contributions. However, an estimate provided by Reddy (1994) for the same period shows that only 3.75 per cent of the GNP was spent on the health out of which 2.1 per cent was in the private sector and 1.65 per cent is in the public sector (table 1.3).¹ In any case, both the estimates showed that private sector expenditure was higher than that of the public sector expenditure. Comparison with most of the developed countries showed that, barring the United States and many of the developing countries, the public sector spending on health in India was inadequate and much lower than that of the private sector health expenditure (table 1.2).

Allocation between preventive and curative services

The major share of the resources has gone to curative services. As of 1990–91, a little more than 60 per cent of the resources had gone to curative services, 26 per cent to preventive services and the remaining percentage to administration and miscellaneous services (table 1.4). Although, a thorough analysis of expenditure is required under each of these categories, in general, preventive services carry with them greater externalities than curative services.

Allocation between consumption and capital expenditure

From table 1.5 it may be seen that 97 per cent of the resources had gone to consumption expenditure and 3 per cent to buildings, machinery and equipment. This shows that a very small

¹ According to Reddy (1994), health expenditure relate to medical, public health and family welfare only. However, World Bank definition of health expenditure is broader and includes non-health ministry programme, such as outlays for prevention, promotion, rehabilitation and care, population activities, nutrition activities, food aid programme and emergency aid specifically for the government.

percentage had gone towards capital formation which helps in improving services and efficiency in the hospitals. Further, most of the resources (60 per cent) were spent on salaries and wages, leaving only 35 per cent for the "others" category to be used for medicines, materials and supplies, transport and so on. The share of salaries increased from 40 per cent in 1974–75 to 60 per cent in 1990–91 while that of machinery and equipment remained almost constant and that of materials and supplies declined (Reddy & Selvaraju 1994). The lack of availability of materials and drugs at public-managed facilities is a major cause of low quality of service, resulting in a lack of demand, especially in the rural areas.

Allocation between plan and non-plan expenditures

Plan expenditures relate to developmental funds.

Lack of provision of services by the public and private sectors according to need

The role of the public and private sectors with respect to provision versus financing needs to be re-examined. The national health spending according to sources and uses is presented in table 1.6 (World Bank 1995). Given that the private sector is the major provider of outpatient and inpatient care, the government is able to focus on more cost-effective preventive health care, such as immunisation, antenatal care, prevention and control of diseases. The extent of provision however is still quite low, especially by the state and local governments. For secondary and tertiary inpatient care, the household sector accounted for 70 per cent of the total expenditure. Though two-thirds of all hospitalisation was at government-owned facilities, which accounted for 71 per cent of all hospital beds, yet private household spending for inpatients was higher. Even though most of the services at public facilities are provided free, there may be many other hidden charges in availing of these services. Also, inadequate facilities at the public hospitals, especially in the rural areas, is a major reason why many people turn to high-cost private facilities.

Neglect of rural areas

As of 1990–91, even though 74.3 per cent of the population was in the rural areas, 67 per cent of the resources spent on health care went to the urban sector and only 33 per cent of the resources went to the rural sector. Further, the central and the union territory governments spent even a smaller amount in the rural areas as compared to the state governments (table 1.7). In terms of per capita allocations, the urban sector received 5.8 times more than that received by the rural sector. This has led to a wide disparity in health status indicators, especially in terms of crude death rate (CDR) and infant mortality rates (IMR) in rural and urban areas. In 1994, CDR in rural areas was 10.1 against 6.5 in the urban areas and IMR was 79 per thousand live births in rural areas as compared to 51 in the urban areas (table 1.8).

If the difference between the cost of delivering various publicly provided goods and recoveries arising therefrom are estimated, Rs 5627 crore went for health services, it will be seen that out of which only 1.35 per cent flowed to the rural areas and the rest 4.55 per cent, was spent in the non-rural areas (Tewari 1996). Such an allocation of subsidies does not appear to be equitable, let alone progressive, given that 74 per cent of the population and the majority of those below the poverty line live in rural areas.

Preference to the elite and higher income groups

Be it medical care, or water supply and sanitation or any other health related facility, the poor are the last ones to receive them. According to a study conducted by Reddy and Sudhakar (1989) for Andhra Pradesh, per household benefits to the poor were Rs 20.42 only as against Rs 39.97 to the middle-income group and Rs 726.17 to the high-income group. Perhaps, for this reason and other associated reasons, it has been observed that "the failure of the present system is not on account of financial and human resources or of infrastructural facilities or shortages of drugs but in their skewed distribution" (Antia 1993). The burden of treatment is higher for the poor in rural as well as urban areas and rural patients pay more than urban patients (Krishnan 1994).

The study by National Council of Applied Economic Research (NCAER) (Shariff 1995) also throws some light on the health expenditure pattern of households according to income level. In table 1.9, the curative health care expenditure of household and morbidity prevalence rate according to the levels of household income and place of residence (i.e. urban and rural) are presented. It can be seen that the poor spent about 7 per cent to 8 per cent of their annual household income on health care in both rural and urban areas, while the relatively richer households spent only 2 per cent to 3 per cent of their household income on health care in both urban and rural areas. This is supported by the fact that the morbidity prevalence rate according to household income and place of residence was always higher in the lower-income classes than in the higher income households. This suggests that the adverse effects of ill-health and sickness are disproportionately higher on the poorer sections in India.

Another household survey carried out by Duggal and Amin (1989) for Jalgaon, Maharashtra indicated that the poor spend far less on their health care compared to the prevalence rate of illness episodes found among them. The poor spend significant amounts on transport and second practitioner's fees and medicines, while the rich spend more on hospitalisation and surgery and on practitioners' fees and medicines. Thus the benefits public health care investments and free provision of primary health care appear not to have reached those who deserve them the most.

Mis-matched between the demand for health services

Public spending on health is inequitable across the states. Under the Constitution of India, the states are responsible for the provision of health care, but for one reason or the other they are not able to cope with the demand for health services. In spite of the devolutions made to them, at the behest of the Finance Commissions and the Planning Commission, the states have not been able to meet their health care requirements. Nor have the states by themselves been able to allocate higher share of their resources to health care. There is a snag in the very arrangement of financial resources for health care under the constitution. The paradox is that for the purpose of political stability and sovereignty the country is treated as one, but for the purpose of providing health care the states are treated as federal units and are asked to fend for

themselves. Hence, health care is linked to the economic capacities of the states. States that have improved their health status more than others are those with higher levels of per capita incomes. Further, the allocation of health resources by the centre favoured the richer states. Instead of allocating funds on the basis of the individual needs of the states, some of communicable disease programmes are funded on a 50–50 basis by the state and central budgets. In terms of the per capita expenditure on health care (medical, public health and family welfare), it was found that there were wide disparities in the expenditures of the state governments, with Uttar Pradesh at the lowest level with Rs 34.62 and Punjab at the highest level with Rs 83.49 (Reddy 1994). Further, the ratio of per capita spending on public health between the highest and the lowest state was 7:1 (Reddy and Selvaraju 1994).

State-wise data on subsidies for 1987–88, 1992–93 and 1993–94 in the health sector shows a positive association between per capita subsidies by the government and health status. States, such as Haryana, Karnataka, Kerala, Maharashtra, Tamil Nadu, Punjab, and West Bengal, which were providing higher per capita subsidies than the average of Rs 35.48 for all-India, were also the states with lower infant mortality rates (table 1.10). A study by Shah (1994) also reflects a similar picture where it was found that though the low-income states accounted for almost half of the total population, their share in health subsidy was just about one-third of the total subsidy in 1987–88.

Inadequate health infrastructure

The central government in recent years has adopted several policies to develop programmes on infrastructure in sectors, such as railways, roads, telecom, and power. However, no mention has been made on developing health care infrastructure in the country. According to a report in Business Standard (29 March 1997), in India there were 407 doctors, 214 nurses, and 1600 beds per 10,000 people for a population of 930 million in contrast to U.S.A. had 2340 doctors, 3204 nurses and 5900 beds for every 10,000 people in a population of 250 million or even Brazil which had 4300 beds for every 10,000 people, the situation in India is really dismal.

State-wise details on health infrastructure are presented in table 1.11 and Table 1.11a. Although Maharashtra accounts for the highest number of hospitals, beds and dispensaries in the urban areas, there are other states which have better infrastructure in rural areas. For example, Kerala has the largest number of hospitals and beds in the rural areas, but Gujarat has a larger number of dispensaries and Uttar Pradesh has the maximum number of beds in the dispensaries. In terms of primary health services, Uttar Pradesh and Bihar seem to provide the largest number of primary health centres, sub-centres and community health centres. Probably, it is owing to this better infrastructure in rural areas, that these two states which had almost the highest IMR in 1987–88, had improved their situation considerably in 1993–94 as compared to other states.

Some funds have also been received from the World Bank, UNICEF and other foreign agencies to improve the health care infrastructure. But the amount is really insignificant.

Deterioration in the quality of services in public hospitals (government hospitals)

Whether at the sub-centre or at the primary health centre in the states, health workers have remained unaccountable to the community. There also seems to be a lack of communication between health functionaries and the community (Kanbargi 1997; Antia 1993). In the words of a medical officer: "Sometimes doctors posted at PHCs have no proper training; they are more thorough in recognising and treating cardiac failure, but ignorant about the treatment of rheumatic fever. Medical officers posted at primary health centres do not have adequate experience in simple tasks like giving injections, I.V. fluids, and resuscitation (Muley 1993)." "General experience of public hospitals is big crowds, long queues, confusing, mazelike layouts, incomprehensible instructions, tedious procedures, casual diagnosis, rough handling by sullen staff, rude physicians, bribe taking by touts, complete absence of accountability and unconscionable delays. Most working people think twice about visiting hospital OPDs (outpatient department) simply because it means missing a day's work and wages... Most public hospitals are inherently patient-unfriendly and hopelessly mismanaged (Bidwai 1992)."

Whereas some public hospitals provide quality services, others have been mismanaged. According to a report in the Hindustan Times (26.1.1995) the size of a hospital in Delhi is in a pathetic state with its 60-bed capacity wards lying empty owing to alleged mismanagement, absence of life-saving drugs and non-functional costly diagnostic equipment. Many times hospital authorities show undue eagerness to make bulk purchases at the fag end of the financial year. In many cases the medicines thus procured are not even needed because of sufficient stock, and in other cases important drugs are always out of stock though they can be bought outside the hospital from a private chemist. Equipment worth crores have either not been used by the hospital or has been slowly sold off by the staff. Sometimes medicines bought exist only on paper and are never available in the store.

Bias of the health care delivery against the unorganised sector and the poor

There is a significant bias in the per capita expenditure on the medical care of the employees of government and other organised sectors as against expenditure on the unorganised sector. Employees of the central government are looked after by the Central Government Health Scheme (CGHS) and employees of the organised sector below a particular salary level are looked after by the Employees State Insurance Scheme (ESIS) to a large extent. CGHS provides comprehensive medical care, that is, almost free medical care and supply of medicines, laboratory and x-ray investigations, domiciliary visits, emergency treatment, ante-natal care, confinement and post-natal care, advice on family welfare, specialist consultation and hospitalisation facilities in government hospitals as well as in hospitals recognised under CGHS. ESIS provides for sickness, medical care, maternity and employment injury benefits to the employees of all factories (with a few exceptions) on payment of contributions from the employees and employers. As of 1995–96, 66.1 lakh persons were insured under ESIS and Rs 316 crore were spent on providing them with medical care in the same year. In terms of per employee, the state governments spent Rs 478 on the medical care of these employees.

According to estimates by Singh (1996), 13 crore of our population between 1985–94 had no access to health services, 17 crore had no access to safe water and 64 crore had no access to sanitation in 1990–95. These figures were substantially higher as compared to other Asian countries. Moreover, most of this population were either below the poverty line or

working in the unorganised sector. Medical technology and drugs have become expensive, consequently, even the middle-and the higher-income people have been turning to government hospitals unmindful of the meagre facilities and chaotic situations prevailing there. Those who can afford to wait in the queue and lose their day's wages are benefited; but those who can not, are the losers and are going to private sector. (i.e. the poor) The system is gradually and surely working against the majority (poor) who badly need subsidised services. However, it is being recognised by the government and the "Health for All" strategy emphasised in the 1983 government policy document is being reoriented towards "Health for underprivileged" (Economic Survey 1996–97). Some of the measures include a social safety net scheme to improve maternal and child health beginning with 90 poorly performing districts. Also, a 'national illness fund' is being set up to provide funds for expensive hospital treatment for people below the poverty line. An assessment of these schemes still needs to be done.

Difficulty in securing higher budgetary allocations to health care

Hardly 4 per cent of total expenditure was allocated to health care between 1974–75 and 1990–91 and, in fact, this had declined from 4.4 per cent in 1974–75 to 3.78 per cent in 1990–91 (table 1.12). In the central government budget for 1996–97 too no higher allocations had been made over the previous year. As against 21 per cent increase in expenditure on health and family welfare in 1994–95 over 1993–94, the increase in 1995–96 over 1994–95 was only 14 per cent (table 1.13). In fact, the budgeted estimate for 1996–97 was Rs 815 crore which was lower than in the previous year.

Emphasis on family welfare with too little effect

Of the total health care expenditure (i.e., expenditure on medical, public health and family welfare) in the country, a little more than 18 per cent was spent on family welfare during 1990–91 without any significant impact on curbing population growth (table 1.14). Moreover, the share of family welfare has been substantially increasing in the central budget, whereas the share of medical and public health has been declining. This is not to say that population control is unimportant. What is important that population control must be cost-effective and wastage

must be avoided. Further, state-wise expenditure on various components show that though more is spent on health care services in urban areas than on family welfare, in rural areas the latter takes the larger chunk of health care expenditure (table 1.15). This results in insufficient health facilities in rural areas.

Lack of efficacy of national health programmes

For programmes such as malaria eradication, filaria control, leprosy eradication, tuberculosis control, control of blindness, iodine deficiency, sexually transmitted diseases (STD) and AIDS, blood safety programme, and mental health programme, there appears to be no proper monitoring and evaluation system and a lack of interest in them. Substantial funds from central plan outlays have been diverted for the control of major diseases, such as malaria (Rs 145 crore), tuberculosis (Rs 65 crore) and AIDS (Rs 141 crores) since these diseases cause highest morbidity and mortality (Economic Survey, 1996-97). However, it is often alleged that the funds have been diverted to purposes unconnected with health care by the states. This appears corroborated in Orissa, Bihar, Uttar Pradesh and Andhra Pradesh where the incidence of tuberculosis and malaria—have not markedly come down in spite of considerable sums allocated to their eradication.

Inefficiency of the health care system

As a whole the system has become inefficient in terms of the nation's resources devoted to health care *vis-a-vis* its impact on health status or provision of health care facilities). Several countries, with a lower or similar percentage of resources devoted to health care than in India, have fared better and achieved better outcomes. The typical examples are China, Chile, Brazil, Malaysia, Venezuela, Thailand, Sri Lanka, Philippines which have managed health care efficiently (table 1.2). The reason is that the same old system "rationing by queue" inherited from the British Raj, with a few modifications here and there in organisational structure, has been continued. No innovations have been attempted either on the financing side or on the delivery side. Shortage of resources have become a perennial problem and this perhaps has encouraged physicians in government to become inactive.

In brief, the present health care system is beset with a number of weaknesses and is in need of a better alternative to improve the health status.

Medical Science has progressed overwhelmingly over the years, but, this has also brought in its wake phenomenal increase in the cost of medicines and health care. Health care in about 1990 cost is atleast \$1.7 trillion or about 8 per cent of world income (Musgrove 1996). On average 60 per cent of this is public spending. Governments also provide a large share of health services, sometimes as large as the share in spending and often intervene in various ways in the private health care market. In India, the government is finding it extremely difficult to increase expenditure in the health sector with competing demands from other sectors, such as education, energy, environment, industry, transport, and agriculture given the limited resources. Further, the private sector is not coming forward to provide health care at a reasonable cost. The net result is that health care, to be more precise medical care, is becoming highly iniquitous, inaccessible and unaffordable to the poor and those in the unorganised sector. The problem is that it is not just more financing that is required for health care, but additional financing for things that significantly contribute to improving the people's health status. This means that a reorientation of health care expenditure is needed. Phenomenal increases in medical costs and competing demand for government funds from several other sectors in the economy make the role of health insurance very important.

A person does not know when he or she will be affected by an illness and whether there will be a loss of wealth to pay for treating it. It is this feeling of insecurity towards an uncertain future that induces individuals to insure themselves against risks. When risks cannot be fully controlled, or the associated costs may be catastrophic, the only solution is to share the risk. Health insurance prevents people from being forced to incur huge expenditures on medication during the period of emotional strain. People deposit premium in order to be eligible for receiving compensation during sickness. Thus, health insurance involves a trade-off between the gains from risk reduction and the deadweight losses from the incentive to purchase more health care when insured (Arrow 1963; Manning & Marquis 1996). The economic purpose of insurance is to reduce financial uncertainties or risks. It is an attempt by risk averse individuals to maximise utility. Other things being equal, individuals are generally willing to pay more than an actually fair amount to reduce the risk

of a large financial loss caused by the possible future occurrence of illness and the resultant medical care expense (Manning & Marquis 1996).

THE CONCEPT OF HEALTH INSURANCE

Health insurance refers to a formal pool of funds held by a third party that pays for the health care costs for the members of the pool (Vogel & Ronald 1990). In developing countries, faced with a financial crunch, fiscal resources are scarce. Health insurance is one among a portfolio of options that augments government budgetary resources for the financing of the health sector.

Demand for health insurance

The consumer's demand for health insurance represents the amount of insurance coverage that he or she is willing to buy at different prices (premiums) for health insurance. Additional insurance coverage will be purchased if the insurance premium declines. The "appropriate" amount of insurance purchased is when the marginal benefit to the consumer for more coverage equals the cost of buying that insurance, other things being equal. (Feldstein 1988). Adding an administrative price to the pure premium would cause the total price of those last units to be greater than their marginal benefits. The consumer would purchase additional coverage only to the point where the benefit of additional coverage equaled the total price of additional coverage.

Several factors that affect the demand for health insurance are given below:

- How risk-averse the individual is: If he or she has a utility curve that is increasing but at a decreasing rate (i.e. diminishing marginal utility with respect to increased income), then the individual is willing to pay an amount above the pure premium for insurance coverage.

- Probability of the event occurring: For those events which have a very low or a very high probability of occurring, a person is willing to pay less above the pure premium as compared to those events that have a more intermediate probability of occurring.
- The magnitude of the loss: The larger the magnitude of the loss, the greater will be the amount above the pure premium that the individual is willing to pay for insurance.
- The price of insurance: The higher the price of insurance (the amount above the pure premium), the fewer will be the events the individual will insure against.
- The income of the individual: The size of a person's income and wealth will affect the amount above the pure premium they are willing to pay for health insurance. At both low and high incomes the marginal utility of income is either relatively high or low, so that such persons might prefer to opt for self-insurance. The distance between the expected and actual utility curve is less at high and low incomes than for intermediate income levels. High income has another opposite effect on the demand for health insurance, because health insurance, as a fringe benefit, is not considered to be part of taxable income.

An important factor that affects the price of insurance, and hence its demand, is whether the individual is part of a large group when purchasing insurance. Group policies are sold at substantially lower prices. The reduced price may be due to lower administrative costs per individual; some of the administrative costs are handled by the group itself. Another reason for lower prices to group members is that there is less likelihood of *adverse selection*. Individuals seeking to purchase health insurance may do so because they believe they will use such coverage in the near future, that is, those individuals who have higher risks will join the plan in higher proportion. But because of the adverse selection, insurance schemes will face great losses or the premia will go up substantially. This would further reduce people with lower risks to opt for insurance. Hence, group insurance schemes, where risk pooling is greater, can be offered at lower premia.

The demand for health insurance is also affected by the tax treatment of health insurance premia. This tax subsidy for the purchase of health insurance lowers the price of insurance to those in high-income groups. As incomes increase and people move into higher tax brackets, there is greater incentive for them to demand fringe benefits rather than increases in their cash incomes. Health insurance premia paid by the employer are excluded from the taxable income of the employee. This tax treatment of health insurance as a fringe benefit lowers its price and has led to a much greater demand for insurance than would otherwise have occurred.

Another factor that affects the demand for health insurance is the method used for reimbursing the provider. Cost-based reimbursement and the use of service benefit policies have dried the patient's incentive to shop around and it is not in the provider's interest to provide care more efficiently. If the provider's costs are reimbursed in full, regardless of what other hospitals may charge, and if the patient is not required to pay any portion of the hospital's bill, as is the case under a service benefit policy, then any incentives for cost containment on either the demander or the supplier have been removed. The greater the probable loss, the greater will be the demand for health insurance. The demand for health insurance is thus affected by economic variables, price and income, the tastes of the individual towards risk aversion, and the size of the probable loss.

The demand for health insurance under conditions of moral hazard

Insurance against health risks raises some well-known difficulties leading to various kinds of market failure. One such problem arises because insurance is a contract by which someone other than the patient agrees to pay for his or her health care. As with all contracts, there is an incentive for the insured to behave differently because of the insurance; this is called moral hazard (Pauly 1968). Moral hazard is either of static and dynamic nature (Zweifel 1992). Under static conditions, not only does the insured desire to consume excessive quantum and quality of services but also the physicians tend to suggest more intensive and costly treatments. This is mainly because the premium he/she pays for the extra services utilised is negligible as the total cost is shared collectively by all the insured persons. The moral hazard under the dynamic nature manifests itself in terms of spread of

new medical technology. Since the cost is going to be covered under the insurance, the physicians would adopt more and more of new technology which is costly but effective. This tendency gives way for the speedy development of costly modern technology.

The existence of moral hazard has two effects. First, the price (premium) of health insurance is increased because both quantum and quality of utilization is increased when the consumer does not have to pay anything out of pocket (the moral hazard issue). Second, this leads to another effect, that is, there is a decrease in the demand for health insurance when their insurance premium is increased.

If no moral hazard exists, then the price (premium) of medical care will not affect its utilization or the quality of care demanded. However, in this case, individuals would not want to insure against all events. Insurance would be more likely for those medical services where the expected loss is greatest and where the probability of the events occurring is neither extremely high nor rare. Requiring insurance for all losses and all probabilities of their occurring, as well as for all individuals, would be economically inefficient; the cost of the insurance would exceed the marginal benefits to the consumer of additional coverage (Feldstein 1988).

It can be observed that demand for health insurance, whether moral hazard is assumed to exist or not, is that even if all individuals were risk averters, insurance coverage for 100 per cent of all of their medical expenses should not be required for all persons. When there are transaction costs for administering claims, and when people have different demands for medical care, no single insurance policy is best for everyone. Some persons will prefer to have only some type of medical expense covered; because of the existence of moral hazard, others will prefer to have some cost-sharing features.

The question then arises is how much health insurance should the population have (i.e. what percentage of total health expenditures should be covered by insurance), and what components of medical services should health insurance cover? The answers would indicate the degree to which the provision of health insurance in the population is economically efficient.

If we assume that there exists competition in the provision or supply of health insurance, then the price at which health insurance is sold will equal the marginal health cost of providing it. In a competitive market, the suppliers will also respond to demands for different types of health insurance coverage and provide such coverage at a price that reflects the cost of producing it. The conditions for economic efficiency on the demand side is that consumers purchase the type of, and quantity of health insurance coverage to the point where its price equals the marginal benefit to them from additional insurance coverage. Since the demand curve indicates the marginal benefit to be derived from the purchase of health insurance, if the cost of additional insurance exceeds its marginal benefit, consumers will be better off purchasing less coverage. When the quantity of health insurance demanded is equal to the cost of providing that insurance, the individual will purchase the appropriate quantity, that is, when the conditions of economic efficiency are met. At that point, the marginal cost of producing health insurance equals the marginal benefit to the consumer of that additional coverage.

Studies show that, in general, demand for health care is inelastic. However, these effects depend upon the level of income. People with low incomes are more likely to be deterred from using services because of high prices than those with high incomes. It is, therefore, important to calculate how the financing rules are likely to affect the amount which different population groups pay for health care.

Based on the above discussion, we can determine the percentage of the distribution of health expenditures that should be covered by health insurance. The distribution of health expenditures is skewed, a large percentage of population have relatively small expenditures, and a smaller percentage of the population have larger expenditures. We would expect the large expenses with a low probability of occurrence to be covered by insurance. At a minimum, the tail of the distribution (relatively large expenditures for a small percentage of the families) should be covered by insurance, through major medical or catastrophic insurance.

Under the conditions of moral hazard, it is observed that there are differences among people in their preferences for demands for medical care. Some persons might prefer some

insurance to either no insurance or complete coverage. What this suggests with regard to the distribution of medical expenditures is that the curve might be modified still further, as shown in the figure. Since the administrative costs of handling small claims are likely to exceed the amount above the pure premium that people are willing to pay for relatively routine, smaller expenses (fig. 1). Since there is moral hazard, people might prefer some co-payment to reduce the size of their premium. Thus, a co-insurance feature would reduce the size of the medical expenses in the middle area. Insurance, in this instance, would cover less than 100 per cent of medical expenditures (different components of the distribution of medical expenses would be covered at different percentage), and the premium for such insurance would be much lower than if it covered the entire distribution of medical expenses.

**TABLE 1.1: HEALTH STATUS IMPROVEMENT IN DEVELOPING AND INDUSTRIAL COUNTRIES
IN 1992 OVER 1960**

	Life Expectancy at Birth (years)			Percentage Increase in 1993 over 1960 in life expectancy at birth	Infant Mortality Rate (IMR)			Percentage Decrease in 1993 over 1960 in infant Mortality rate
	1960	1992	1993		1960	1992	1993	
India	44.0	59.7	60.7	38.0	165	89	81	50.9
China	47.1	70.5	68.6	45.7	150	27	44	70.7
Sri Lanka	62.0	71.2	72.0	16.1	71	24	17	76.1
Philippines	52.8	64.6	66.5	26.0	80	40	43	46.3
Thailand	52.3	68.7	69.2	32.3	103	26	36	65.1
Malaysia	53.9	70.4	70.9	31.5	73	14	13	82.2
Korean Republic	53.9	70.4	71.2	32.1	85	21	24	71.8
Indonesia	41.2	62.0	63.0	52.9	139	52	56	59.7
High human development countries	56.7	70.5	71.1	25.4	88	30	28	68.2
Medium human development countries	47.7	68.0	66.9	40.3	143	40	48	66.4
Low human development countries	41.9	55.8	56.0	33.7	168	98	92	45.2
All developing countries	46.0	63.0	61.5	33.7	150	69	70	53.3
a. Least developing countries	38.8	50.1	51.1	31.7	173	112	110	36.4
b. Sub-saharan Africa	40.1	51.1	51.0	27.2	167	101	97	41.9
Industrial Countries	-	74.5	-	-	-	13	-	-
World	-	65.6	-	-	-	60	-	-

Source: UNDP Human Development Report, 1996, pp. 136-137.

**TABLE 1.2: HEALTH EXPENDITURE AND HEALTH STATUS: INTERNATIONAL COMPARISON
(1990)**

Countries	Total Health Expenditure (official exchange rate dollars)		Health Expenditure as a Percentage of GDP			Health Status	
	Millions 1990	Per capita 1990	Total 1990	Public sector 1990	Private sector 1990	Infant mortality Rate (per 1000 births) 1992	Life Expectancy At birth (years) 1991
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Mozambique	85	5	5.9	4.4	1.5	162	47
Ethiopia	229	4	3.8	2.3	1.5	122	48
Tanzania	109	4	4.7	3.2	1.5	92	51
Nepal	141	7	4.5	2.2	2.3	99	53
Uganda	956	6	3.4	1.6	1.8	122	46
Bangladesh	715	7	3.2	1.4	1.8	91	51
Madagascar	79	7	2.6	1.3	1.3	93	51
India	17,740	21	6.0	1.3	4.7	79	60
Kenya	357	16	4.3	2.7	1.6	66	59
Nigeria	906	9	2.7	1.2	1.6	84	52
Pakistan	1,394	12	3.4	1.8	1.6	95	59
Ghana	204	14	3.5	1.7	1.8	81	55
China	12,969	11	3.5	2.1	1.4	31	69
Sri Lanka	305	18	3.7	1.8	1.9	18	71
Zimbabwe	416	42	6.2	3.2	3.0	47	60
Egypt, Arab Rep.	921	18	2.6	1.0	1.6	57	61
Indonesia	2,148	12	2.0	0.7	1.3	66	60
Sudan	300	12	3.3	0.5	2.8	99	51
Cote d'Ivoire	332	38	3.3	1.7	1.6	91	52
Philippines	883	14	2.0	1.0	1.0	40	65
Cameroon	286	24	2.6	1.0	1.6	61	55
Uzbekistan	2,388	116	5.9	4.3	1.6	42	69
Peru	1,065	49	3.2	1.9	1.3	52	64
Morocco	661	26	2.6	0.9	1.6	57	63

(Table 1.2 contd.)

Countries	Total Health Expenditure (official exchange rate dollars)		Health Expenditure as a Percentage of GDP			Health Status	
	Millions 1990	Per capita 1990	Total 1990	Public sector 1990	Private sector 1990	Infant mortality Rate (per 1000 births) 1992	Life Expectancy At birth (years) 1991
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Ecuador	1,455	43	4.1	2.6	1.6	45	66
Romania	1,455	63	3.9	2.4	1.5	23	70
Colombia	1,604	50	4.0	1.8	2.2	21	69
Ukraine	6,803	131	3.3	2.3	1.0	18	70
Algeria	4,159	166	7.0	5.4	1.6	55	66
Thailand	4,061	73	5.0	1.1	3.9	26	69
Poland	3,157	83	5.1	4.1	1.0	14	71
Turkey	4,281	76	4.0	1.5	2.5	54	67
Iran, Islamic Rep.	3,024	54	2.6	1.5	1.1	65	65
Russian Federation	23,527	157	3.0	2.0	1.0	20	69
Chile	1,315	100	4.7	3.4	1.4	17	72
Syrian Arab Rep.	283	23	2.1	0.4	1.6	36	67
South Africa	5,671	158	5.6	3.2	2.4	53	63
Brazil	19,871	132	4.2	2.8	1.4	57	66
Malaysia	1,259	67	3.0	1.3	1.7	14	71
Venezuela	1,747	89	3.6	2.0	1.6	33	70
Belarus	1,613	157	3.2	2.2	1.0	15	71
Hungary	1,613	185	6.0	5.0	0.9	15	70
Mexico	7,648	89	3.2	1.6	1.6	35	70
Argentina	4,441	138	4.2	2.5	1.7	29	71
Greece	3,609	358	5.5	4.2	1.3	8	77
Saudi Arabia	4,784	322	4.8	3.1	1.7	28	69
Spain	32,375	831	6.6	5.2	1.4	8	77
Australia	22,736	1,331	7.7	5.4	2.3	7	77
United Kingdom	59,623	1,039	6.1	5.2	0.9	7	75

(Table 1.2 contd.)

Countries	Total Health Expenditure (official exchange rate dollars)		Health Expenditure as a Percentage of GDP			Health Status	
	Millions 1990	Per capita 1990	Total 1990	Public sector 1990	Private sector 1990	Infant mortality Rate (per 1000 births) 1992	Life Expectancy At birth (years) 1991
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Italy	82,214	1,426	7.5	5.8	1.7	8	77
Netherlands	22,423	1,500	7.9	5.7	2.2	6	77
Canada	51,594	1,945	9.1	6.8	2.4	7	77
Belgium	14,428	1,449	7.5	6.2	1.3	9	76
France	105,467	1,869	8.9	6.6	2.3	7	77
Germany	120,072	1,511	8.0	5.8	2.2	6	76
United States	690,667	2,763	12.7	5.6	7.0	9	76
Japan	189,930	1,538	6.5	4.8	1.6	5	79

Sources: World Bank, **World Development Report** (1993) for Columns 1, 2, 3, 4, 5 and 7.
World Bank, **World Development Report** (1994) for Column 6.

TABLE 1.3: ESTIMATE OF TOTAL HEALTH EXPENDITURE IN INDIA, 1990-91

Source	Total (Rs Crore)	Per capita (Rs)	Percentag e of total expenditur e	Percentage of GDP	Total (Rs Crore)	Percentage of GDP
	WDR Estimates ¹				Reddy's Estimates ²	
Public Sector						
Centre	554	6.6	2.1	0.1	913	
States/Union Territories	4981	59.3	18.6	1.1	4988	
Municipalities/local Govt.	126	1.5	0.5	<0.1	1693	
External aid	118	1.4	0.5	<0.1	115	
Sub-total	5779	68.8	21.5	1.3	7709	1.65
Private Sector						
Out-of-pocket	20160	240.0	75.2	4.5	8182	
Private employers	319	3.8	1.2	0.1	1502	
ESIS contributions	202	2.4	0.8	<0.1		
Other sources	361	4.3	1.4	0.1	5971	
Sub-total	21042	250.5	78.5	4.7	9744	2.09
Total	26821	319.3	100.0	6.0	17452	3.75

Sources: 1. World Development Report, 1993. Also in Ellis, R. P. *et.al.* 1996 (unpublished).
2. Reddy (1994)

TABLE 1.4: STRUCTURE OF HEALTH CARE EXPENDITURE BY PURPOSE AND BY LEVEL OF GOVERNMENT: 1974-75 TO 1990-91

(percentage)

Level of Government/Purpose	Direction ¹ and administration	Curative ²	Preventive ³	Miscellaneous ⁴	Total
1974-75					
a. Central government	4.79	57.43	19.65	18.13	100.00
b. State governments	6.45	64.72	22.91	5.91	100.00
c. Union territory governments	8.01	32.73	3.49	5.76	100.00
d. All governments (a+b+c)	6.35	64.46	22.34	6.86	100.00
1978-79					
a. Central government	4.00	56.45	23.22	16.33	100.00
b. State governments	4.67	62.50	25.21	7.62	100.00
c. Union territory governments	2.92	74.29	11.11	11.66	100.00
d. All governments (a+b+c)	4.59	62.26	24.81	8.34	100.00
1982-83					
a. Central government	3.02	55.00	22.85	19.13	100.00
b. State government	5.03	60.45	27.18	7.34	100.00
c. Union territory governments	3.18	75.26	10.94	10.61	100.00
d. All governments (a+b+c)	4.82	60.26	26.51	8.42	100.00
1986-87					
a. Central government	2.46	54.07	21.12	12.35	100.00
b. State governments	5.01	57.20	32.03	5.76	100.00
c. Union territory governments	3.83	82.47	10.62	3.08	100.00
d. All governments (a+b+c)	4.73	58.50	30.41	6.36	100.00
1990-91					
a. Central government	2.66	62.58	25.54	10.22	100.00
b. State government	5.12	59.19	27.14	8.55	100.00
c. Union territory governments	4.63	86.12	6.76	2.48	100.00
d. All governments (a+b+c)	4.88	60.25	26.33	8.53	100.00

Source: Reddy, K. N. and V. Selvaraju, *Health Care Expenditure by Government of India: 1974-75 to 1990-91*, New Delhi, National Institute of Public Finance and Policy, (1994).

- Notes:
1. Includes direction and administration under (a) Medical, (b) Public health and (c) Family welfare.
 2. Includes expenditure on Medical Relief, Employees State Insurance, Central Government Health Scheme, Medical Education Training, Research, Other Systems of Medicine — Ayurveda, Homeopathy, *Siddha*, *Unani*, etc. — under **Medical**.
 3. Includes expenditure on (a) Prevention and control of diseases, prevention of food adulteration, drug control, Minimum Needs Programme under **Public Health**, and (b) Rural Family Planning Service, Urban Family Planning Service, Maternity and Child Health, Compensation and Other Services and Supplies under Family Welfare.
 4. Includes expenditure on (a) International co-operation, medical stores department, department of drugs, school health scheme, other health schemes and tribal area, sub-plan under **Medical**, (b) Training, health statistics and research, public health laboratories, health transport, international co-operation under **Public Health** and (c) Transport selected area programme, mass education, training, research and statistics research and evaluation, awards tribal area sub-plan and international co-operation under Family Welfare.

TABLE 1.5: STRUCTURE OF HEALTH CARE EXPENDITURE* BY THE GOVERNMENT BY ECONOMIC CATEGORIES 1974-75 TO 1990-91 (THE CENTRAL, THE STATE AND THE UNION TERRITORY GOVERNMENTS COMBINED)

(percentage)

Year	Salary	Office expenses	Machinery and equipment	Others**	Total column (1+2+3+4)
1974-75	39.93	4.37	2.85	52.86	100.00
1978-79	40.11	3.61	3.20	53.09	100.00
1982-83	51.14	4.58	2.91	41.37	100.00
1986-87	52.41	3.55	3.34	40.70	100.00
1990-91	58.97	2.58	2.97	35.47	100.00

Source: Reddy, K. N. and V. Selvaraju, Health Care Expenditure by Government of India: 1974-75 to 1990-91, New Delhi, National Institute of Public Finance and Policy, 1994.

Notes: * Health care expenditure refers to expenditure on medical relief, hospitals and dispensaries and family welfare only.

** **Others** include materials and supplies, travel expenses, motor vehicles (purchase maintenance, cost of fuel), hospital accessories, medicines, rents and taxes, festival advance, petroleum, oil lubricants, stores and equipment, scholarships and stipends, cost of text books to the children of low paid government servants. They vary from state to state.

TABLE 1.6: NATIONAL HEALTH SPENDING AND PRIMARY HEALTH CARE: AN ESTIMATED "SOURCES AND USES" MATRIX FOR NATIONAL HEALTH EXPENDITURE, 1991

(as percentage of total expenditure)

Uses	Sources				
	Central Govt.	State and Local Govt.	Corporate/3rd Party	Households	Total
Curative (Row %)	.35 (.7)	3.00 (6.0)	.8 (1.6)	45.6 (91.7)	49.7 (100)
Preventive and public health (Row %)	3.95 (43.9)	2.65 (29.4)		2.4 (26.7)	9 (100)
Primary care (Row %)	4.3 (7.3)	5.6 (9.5)	.8 (1.3)	48 (81.7)	58.7 (100)
Secondary/ tertiary inpatient care (Row %)	.9 (2.3)	8.4 (21.7)	2.5 (6.4)	27 (69.6)	38.8 (100)
Non-service provision	.9	1.6			2.5
Total	6.1	15.6	3.3	75	100

Source: World Bank, 1995

TABLE 1.7: PERCENTAGE SHARES OF RURAL AND URBAN SECTORS IN HEALTH CARE EXPENDITURES BY LEVEL OF GOVERNMENT: 1990-91

Levels of Government	Rural	Urban
A. Central Government	29.00	71.00
B. State Governments		
Andhra Pradesh	31.80	68.20
Assam	35.60	64.40
Bihar	42.73	57.27
Gujarat	29.03	70.97
Haryana	37.44	62.56
Karnataka	31.60	68.40
Kerala	34.13	65.87
Madhya Pradesh	35.33	64.87
Maharashtra	33.62	66.38
Orissa	36.33	63.67
Punjab	38.51	61.49
Rajasthan	31.31	68.69
Tamil Nadu	30.89	69.11
Uttar Pradesh	35.87	64.13
West Bengal	30.83	69.17
State Governments (Total)	33.79	66.21
C. Union Territory Governments	22.55	77.45
D. All Governments (A + B + C)	33.04	66.96

Source: Reddy, K. N. and V. Selvaraju, Health Care Expenditure by Government of India: 1974-75 to 1990-91, New Delhi, National Institute of Public Finance and Policy, 1994.

TABLE 1.8: HEALTH STATUS INDICATORS ACCORDING TO SECTORS (1985–1995)

Year	Crude Death Rate (per 1000 population)			Infant Mortality Rate (per 1000 live births)			Life Expectancy at Birth (years)			Child Death Rate under age 5 years (per 1000 population)		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1985	13.8	8.6	12.6	107	59	97	57	56	56	43.3	20.7	38.4
1986	12.2	7.6	11.1	105	62	96	57	56	57	40.8	20.9	36.6
1987	12	7.4	10.9	104	61	95	58	58	58	39.7	18.2	35.2
1988	12	7.7	11	102	62	94	58	58	58	35.7	18.7	33.3
1989	11.1	7.2	10.3	98	58	91	58	59	59	33.2	16.9	29.9
1990	10.5	6.8	9.7	86	50	80	60	58	59	29.1	15.1	26.3
1991	10.6	7.1	9.8	87	53	90	60	60	60	29.1	16.0	26.5
1992	10.9	7	10.1	85	53	79	N.A.	N.A.	61	29.1	15.6	26.5
1993	10.5	5.7	9.2	82	45	74	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
1994	10.1	6.5	9.2	79	51	73	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

Source: Sample Registration Systems for the years 1985-87, Registrar General of India, Government of India. [For the Data on Child Death Rate for the years 1985, 1986, 1987].
 Health Monitor 1994 FRHS, Ahmedabad. [For the Data on Child Death Rate for the years 1988].
 Health Information of India- 1994, CBHI, Ministry of Health, Government of India. [For the Data on Child Death Rate for the years 1989].
 Health Monitor 1995 FRHS, Ahmedabad. [For the Data on Child Death Rate for the years 1990, 1991, 1992].
 Health Information of India- 1992, CBHI, Ministry of Health, Government of India-(for 1985-90).
 Sample Registration System, for the year 1991 and 1992.
 Economic Survey 1994-95, for the year 1993 P.No. S-1.
 Foundation for Research in Health Systems, Pune 1994 "Health Monitor", p. No. 12.
 World Development Report (various issues).

Notes: Statistics referred to 1990–91 and 1992 excludes states of Jammu and Kashmir.

TABLE 1.9: HOUSEHOLD EXPENDITURE ON CURATIVE HEALTH CARE AND MORBIDITY PREVELANCE 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	10946	855.84	7.82	103
18001-54000	29033	1195.44	4.12	97*
54001 +	76039	1722.33	2.27	99*
Total	18716	988.40	5.28	299
Urban				
18000	12832	908.18	7.08	98
18001-54000	32147	1352.33	4.21	87*
54001 +	78504	2313.20	2.95	85*
Total	430184	1294.09	4.29	270
Total				
18000	11303	865.75	7.66	109
18001-54000	30233	1255.93	4.15	95*
54001 +	77431	2055.84	2.66	85*
Total	21931	1074.10	4.90	289

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.

@ Figures for rural and urban classification 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 1.10: STATEWISE DETAILS OF SUBSIDIES TO HEALTH

State	Total Subsidy (Rs lakh)			Per Capita Subsidy (Rs)			Share to Total Subsidy (%)			Infant Mortality Rate (per 1000 births)		
	1987-88	1992-93	1993-94	1987-88	1992-93	1993-94	1987-88	1992-93	1993-94	1987-88	1992-93	1993-94
Andhra Pradesh	22278	40539	88937.76	36.95	60.95	126.81	9.73	7.92	15.41	82	64	64
Bihar	17404	29167	37485.33	21.75	33.77	41.11	9.08	7.12	8.07	101	70	67
Goa	N.A.	N.A.	4148	N.A.	N.A.	313.75	N.A.	N.A.	13.03	N.A.	N.A.	N.A.
Gujarat	14154	27281	29720.15	36.65	66.04	68.74	7.05	5.71	5.34	107	58	70
Haryana	6330	11131	21563.07	41.4	67.61	124.42	8.16	5.87	10.87	85	65	58
Karnataka	17946	34862	36540.21	42.3	77.51	77.69	10.53	9.09	7.61	74	67	63
Kerala	13482	23384	28142.03	47.36	80.36	93.69	11.61	8.9	9.51	27	13	13
Madhya Pradesh	18959	34435	40497.25	31.7	52.03	57.60	9.21	7.6	4.28	118	106	106
Maharashtra	31864	57082	61921.54	44.67	72.31	74.16	11.39	10.27	12.05	63	50	50
Orissa	9513	17085	18407.59	32.19	53.96	55.79	9.12	6.41	6.96	123	110	110
Punjab	10603	19998	21063.41	56.07	98.6	99.47	9.28	8.42	7.89	58	55	55
Rajasthan	15105	32666	37206.70	37.21	74.23	79.54	9.06	8.88	8.76	107	82	82
Tamil Nadu	19939	48122	52534.26	37.16	86.15	91.09	8.56	8.32	8.36	90	56	56
Uttar Pradesh	36934	67623	97016.10	29.2	48.61	65.82	10.93	8.99	11.63	132	93	94
West Bengal	23530	44675	48243.29	38.09	65.62	67.05	11.84	10.97	10.49	71	58	58
All States	258039	488050	623427.31	35.48	61.87	74.93	9.83	8.34	8.98	96	74	

- Notes: 1. Government subsidies here means difference between the cost of delivering various publicly provided goods or services and the recoveries arising from such deliveries.
2. Estimates of Infant Mortality Rate has been taken from Sample Registration System, Registrar General of India for 1987-88, 1991 and 1992-93.

TABLE 1.11: HEALTH CARE INFRASTRUCTURE STATISTICS YEAR: 1993

State/UT	Hospital						Dispensary						
	Functioning			Beds			Functioning			Beds			
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	
Andhra Pradesh		733	1130	1863	9491	17300	26791	222	81	303	38	143	181
Arunachal Pradesh		251	11	262	1654	822	2476	10	1	11	0	0	0
Assam@		151	117	268	3949	8712	12661	297	28	325	36	6	42
Bihar*		100	228	328	3018	26072	29090	411	16	427	0	96	96
Goa		45	69	114	1345	2299	3644	308	321	629	0	0	0
Gujarat		189	2181	2370	6800	52184	58984	2420	4828	7248	1345	8030	9375
Haryana		8	70	78	543	6485	7028	40	177	217	18	384	402
Himachal Pradesh		19	38	57	496	3356	3852	173	21	194	159	24	183
Jammu and Kashmir#		65	2	67	8062	140	8202	583	27	610	0	0	0
Karnataka		25	268	293	3015	34914	37929	596	234	830	565	344	909
Kerala		1443	597	2040	44103	33096	77199	1439	512	1951	95	68	163
Madhya Pradesh.		245	118	363	6182	11959	18141	130	126	256	0	2	2
Maharashtra		469	2646	3115	10209	68711	78920	352	7791	8143	257	1365	1622
Manipur		25	4	29	925	636	1561	39	3	42	0	0	0
Meghalaya		0	9	9	0	1867	1867	19	2	21	0	0	0
Mizoram		6	11	17	196	1108	1304	18	0	18	180	0	180
Nagaland		21	10	31	257	793	1050	16	0	16	64	0	64

(Table 1.11 contd.)

Orissa		122	162	284	3427	11067	14494	156	76	232	75	60	135
Punjab		75	142	217	2330	12341	14671	1217	245	1462	4849	622	5471
Rajasthan		15	203	218	1050	19415	20465	14	269	283	0	140	140
Sikkim*		0	5	5	0	575	575	143	0	143	0	0	0
Tamil Nadu \$		89	319	408	4235	44545	48780	147	365	512	138	140	278
Tripura		12	13	25	335	1395	1730	468	6	474	0	0	0
Uttar Pradesh		83	652	735	2585	44693	47278	1318	432	1750	5137	592	5729
West Bengal		113	279	392	7486	47281	54767	408	143	551	0	0	0
A & N Islands		2	1	3	164	412	576	0	0	0	0	0	0
Chandigarh		0	1	1	0	500	500	9	30	39	0	0	0
D & N Haveli		0	3	3	0	70	70	3	0	3	6	0	6
Daman & Diu*		0	3	3	0	150	150	15	13	28	0	0	0
Delhi		4	78	82	252	18518	18770	97	559	656	0	0	0
Lakshadweep		0	2	2	0	70	70	1	2	3	0	0	0
Pondicherry		0	10	10	0	2608	2608	11	15	26	38	157	195
All India		4310	9382	13692	122109	474094	596203	11080	16323	27403	13000	12173	25173

Sources: For hospitals and number of beds: Health Information of India 1994, CBHI, DGHS, MOHFW, GOI, New Delhi (Table no. 8.01, pp. 119).
For dispensaries and number of beds: Health Information of India 1994, CBHI, DGHS, MOHFW, GOI, New Delhi (Table no. 8.03, pp. 121)

Notes: * Figures for hospital and beds and dispensaries and beds are for the year 1992.
@ Figures for hospital and beds and dispensaries and beds are for the year 1991.
Figures for hospital and beds and dispensaries and beds are for the year 1989.
\$ Figures for hospital and beds and dispensaries and beds are for the year 1990.
** Figures for hospital and beds and dispensaries and beds are for the year 1986.

TABLE 1.11A: STATE-WISE NUMBER OF PHCs, SUB-CENTRES AND CHCs YEAR: 1993

States/U.T.	PHC	Sub-Centre	CHC
Andhra Pradesh	1283	7894	46
Arunachal Pradesh	36	203	7
Assam	571	5280	97
Bihar	2209	14799	148
Goa	21	175	5
Gujarat	936	7284	170
Haryana	394	2299	59
Himachal Pradesh	210	1851	39
Jammu and Kashmir	295	1700	37
Karnataka	1312	7793	193
Kerala	908	5094	54
Madhya Pradesh	1182	11910	191
Maharashtra	1683	9377	296
Manipur	67	420	13
Meghalaya	79	337	8
Mizoram	38	244	5
Nagaland	33	244	4
Orissa	996	5927	152
Punjab	472	2964	104
Rajasthan	1413	8000	231
Sikkim	23	142	2
Tamil Nadu	1436	8681	72
Tripura	62	530	10
Uttar Pradesh	3737	20153	248
West Bengal	1546	7873	87
A & N Islands	17	96	4
Chandigarh	0	12	1
D & N Haveli	5	34	0
Daman & Diu	4	19	2
Delhi	8	42	0
Lakshadweep	7	14	1
Pondicherry	26	79	3
All India	21009	131470	2289

Source: Health Information of India, 1994 (pp. 128-133).

**TABLE 1.12: PERCENTAGE SHARE OF HEALTH CARE EXPENDITURE IN TOTAL EXPENDITURE
(CENTRE, STATES AND UNION TERRITORIES COMBINED)**

Year	Medical and Public Health	Family Welfare	Total
1974-75	3.89	0.54	4.43
1978-79	4.05	0.48	4.53
1982-83	3.66	0.75	4.41
1986-87	3.09	0.78	3.87
1990-91	3.14	0.64	3.78

Source: Reddy, K. N. and V. Selvaraju, Health Care Expenditure by Government of India: 1974-75 to 1990-91, New Delhi, National Institute of Public Finance and Policy, 1994.

TABLE 1.13: HEALTH CARE EXPENDITURE BY CENTRAL GOVERNMENT 1993-94 TO 1995-96

		1993-94 (account) (Rs crore)	1994-95 (account) (Rs crore)	1995-96 (Revised estimate) (Rs crore)	Percentage increase (decrease) in 1994-95 over 1993-94	Percentage increase (decrease) in 1995-96 over 1994-95
A.	Revenue Account					
1.	Medical & public health	565.10 (87.35)	690.52 (88.27)	731.94 (82.09)	22.19	5.99
2.	Family welfare	81.85 (12.65)	91.73 (11.73)	159.71 (17.91)	12.07	74.11
3.	Total	646.95 (100.00)	782.25 (100.00)	891.65 (100.00)	20.91	13.98
B.	Capital Account					
1.	Medical & public health	2.54 (94.42)	67.39 (98.26)	13.20 (99.17)	2553.15	-80.41
2.	Family welfare	0.15 (5.58)	1.19 (1.74)	0.11 (0.83)	693.33	-91.59
3.	Total	2.69 (100.00)	68.58 (100.00)	13.31 (100.00)	2449.44	-80.59
C.	Total Expenditure on Health on Family Welfare					
1.	Medical & public health	567.64 (87.38)	757.91 (89.08)	745.14 (82.34)	33.52	1.68
2.	Family welfare	82.00 (12.62)	92.92 (10.92)	159.82 (17.66)	13.32	71.99
3.	Total	649.64 (100.00)	850.83 (100.00)	904.96 (100.00)	30.97	6.36

Source: Annual Financial Statement of the Central Government (1996-97).

Note: Figures in brackets are percentages to total.

TABLE 1.14 : COMPOSITION OF EXPENDITURE ON MEDICAL, PUBLIC HEALTH AND FAMILY WELFARE, BY MAJOR ITEMS AND BY LEVEL OF GOVERNMENT: 1990-91

(percentage)

Sl.No.	Programme	Central Government	State Government	Union Territory Government	All Govt. Total
A.	MEDICAL - 2210				
1.	Direction & administration	1.25	1.40	3.01	1.44
2.	Medical relief	10.26	41.12	76.74	39.30
3.	Employees state insurance	0.00	4.98	0.00	4.39
4.	Central govt. health scheme	16.24	0.02	0.00	1.50
5.	Medical Edn. training research	35.57	8.51	7.14	10.94
6.	Other systems of medicine				
	i. Ayurveda	0.32	2.50	1.11	2.26
	ii. Homeopathy	0.12	0.56	1.06	0.53
	iii. Others (including Siddha, Unani, etc.)	0.06	1.52	0.07	1.34
	Total	0.50	2.48	2.24	2.29
7.	Medical expenditures	0.04	3.31	1.71	2.97
A.	Total, Medical	63.87	63.90	90.85	64.66
B.	PUBLIC HEALTH - 2210				
1.	Direction & administration	0.42	2.42	1.58	2.22
2.	Prevention & control of diseases	5.10	11.78	4.86	10.98
	Prevention of food adulteration				
3.	Drug control	0.27	0.70	0.95	0.67
4.	Health education and publicity	0.30	0.40	0.31	0.39
5.	Minimum needs programme	1.05	0.38	0.30	0.44
6.	Other expenditures	0.00	0.98	0.00	0.86
7.	Total, Public Health	3.78	1.56	0.75	1.74
B.	Total, Medical & Public Health (A + B)	74.78	82.13	99.59	81.95

(Table 1.14 contd.)

Sl.No.	Programme	Central Government	State Government	Union Territory Government	All Govt. Total
C.	FAMILY WELFARE - 2211				
1.	Direction & administration	0.99	1.29	0.04	1.23
2.	Rural family planning services	0.06	6.97	0.15	6.15
3.	Urban family planning services	0.52	1.21	0.00	1.11
4.	Maternity and child health	8.19	0.87	0.02	1.52
5.	Compensation	0.26	2.61	0.08	2.32
6.	Other services & supplies	8.79	1.24	0.10	1.89
7.	Other expenditures	6.40	3.68	0.02	3.82
C.	Total, Family Welfare	25.22	17.68	0.41	18.05
D.	Total Medical And Public Health and Family Welfare (A + B + C)	100.00	100.00	100.00	100.00

Source: Reddy, K. N. and V. Selvaraju, Health Care Expenditure by Government of India: 1974-75 to 1990-91, New Delhi, National Institute of Public Finance and Policy, 1994.

TABLE 1.15: CENTRE AND STATE GOVERNMENT EXPENDITURE ON HEALTH YEAR: 1993-94

	A.P.	Bihar	Goa	Gujarat	Haryana	Karnataka	Kerala	M.P.	Maharashtra	Orissa	Punjab	Rajasthan	T.N.	U.P.	West Bengal	All States	Centre*
Medical and Public Health																	
01 Urban Health Services	19625.27	9987.30	1803.99	11005.02	2407.85	11320.15	12468.38	14220.01	21567.75	5027.53	7347.71	12795.68	21188.58	24277.09	25848.43	200890.74	33102.81
02 Rural Health Services	6476.82	12483.89	834.72	6219.39	3479.57	454.72	5041.28	9453.33	2134.32	5307.64	7174.98	10643.20	8091.37	25532.43	8451.34	111779.02	1553.98
03 Medical Edu., Trg., & Res.	3692.67	2675.94	992.63	3412.56	2441.92	3602.55	4102.98	3972.01	7045.32	1575.95	2209.64	3846.22	7124.81	8488.63	3727.17	58911.02	32855.82
04 Public Health	9757.61	3758.59	293.40	6565.01	2044.41	3102.36	2316.30	7084.08	27282.75	2881.08	2316.15	4027.30	8044.34	15730.22	6398.07	101601.67	10757.90
80 General	299.82	2158.98	277.22	92.56	79.63	13317.83	0.00	24.78	943.57	152.21	415.11	0.00	983.40	83.74	83.25	18912.10	838.14
Total	39852.18	31064.71	4201.97	27294.54	10453.39	31797.62	23928.94	34754.21	58973.70	14944.41	19463.59	31312.40	45432.50	74112.11	44508.27	492094.55	79108.65
Family Welfare																	
101 Rural Family Welfare Services	5060.65	5684.01	59.25	3287.59	806.53	102.72	3542.14	2816.82	1962.46	1595.39	1093.85	3385.19	4216.26	10588.36	4396.87	48598.08	67.87
102 Urban Family Welfare Services	253.78	20.64	10.42	268.81	140.07	193.30	30.15	324.01	553.48	103.02	191.11	237.18	1903.51	636.44	112.03	4977.95	152.77
103 Maternity and Child Health	1081.71	277.72	1.38	189.20	302.65	714.30	463.38	169.59	1792.93	111.25	349.25	1366.88	1287.82	3355.56	56.55	11520.17	238.26
108 Selected Area Programme	893.41	0.00	0.00	0.00	391.70	1252.27	815.47	0.00	1302.02	0.00	39.31	0.00	134.00	1672.08	2631.07	9131.33	66.13
800 Others	43732.78	1465.17	25.51	1920.15	10718.65	4750.27	901.17	3407.24	3149.80	2183.57	2030.30	2443.38	2303.72	8242.52	841.03	88115.25	9247.95
Total	51022.33	7447.54	96.56	5665.74	12359.61	7012.86	5752.30	6717.66	8760.69	3993.22	3703.81	7432.63	9845.31	24494.96	8037.56	162342.79	9772.98
Medical Public Health and Family Welfare	90874.51	38512.25	4298.53	32960.29	22813.00	38810.48	29681.25	41471.88	67734.39	18937.63	23167.40	38745.03	55277.81	98607.07	52545.82	654437.34	88881.63

Source: *Figures for Centre are for year 1994-95. Finance A/c's

NOTES

1. The Bhore Committee was known as the Health Survey and Development Committee, appointed in 1943 by then the British Government under the chairmanship of Sir Joseph Bhore. It dealt with a country, then under British occupation, which now comprises three independent countries — India, Pakistan and Bangladesh. The recommendations of the committee are comprehensive, covering almost all facts of health, including development of health manpower and mechanics of funding, in the context of the plan. The main principles underlying the committee's proposal, for the future health development of the country centred round the following guiding principles:

(a) No individual should fail to secure adequate medical care because of inability to pay for it.

(b) The health programme, must, from the very beginning, lay special emphasis on preventive work with consequential development of environmental hygiene.

(c) The health services should be placed as close to the people as possible in order to ensure the maximum benefit to the communities to be served.

(d) The active co-operation of the people should be sought in the development of health programmes, through the establishment of health committee's in every village.

(e) The Doctor — the leader of the health team — should be a 'social physician', who should combine both remedial and preventive measures so as to confer the maximum benefit on the community. Future doctors should be trained to equip them for all such duties.

(f) Under the conditions existing in the country, medical services should be free to all without distinction and the contribution from those who can afford to pay should be through the channel of general and local taxation. It will be for the governments of the future ultimately to decide whether medical service should remain free to all classes of the people or whether an insurance scheme would be more in accordance with the economic, social and political requirements of the country at the time (Government of India, Central Bureau of Health Intelligence, Directorate General of Health Services, Ministry of Health and Family Planning, Compendium of Recommendations of Various Committees on Health Development, 1943-1975, p. 9 and p. 6, 1985).

2. A Health Survey and Planning Committee was appointed in 1961 under the chairmanship of Dr. A. Lakshmanaswami Mudaliar to assess or evaluate, the field of medical relief and public health since the submission of the Bhore Committees report, also, to review the first and second five-year plans health projects and to formulate recommendations for the future plan of health development in the country.

3. A special committee was appointed in 1966 under the chairmanship of Shri B. Mukherjee, the then Secretary of Health, to review staffing patterns and funding provision under the family planning programme.

4. A committee known as a Committee on Multi-Purpose Worker was appointed in 1973 under the chairmanship of Shri Kartar Singh, the then Secretary, Ministry of Health and Family Planning to examine the feasibility of having multi-purpose workers in the field under the health and family planning programme and to make suitable recommendations in that connection.

5. A committee known as a Group of Medical Education and Support Manpower was appointed in 1974 under the chairmanship of Dr. J.V. Shrivastava, Director General of Health Services to: (a) devise a suitable curriculum for training a cadre of health assistants conversant with basic medical aid, preventive and nutritional services, family welfare, and maternity and child welfare activities, to serve as a link between the qualified medical practitioners and the multipurpose workers, and (b) suggest suitable ways and means to implement the recommendations made by medical education committees appointed earlier in 1968, and suggest steps for improving the existing medical educational processes so as to provide due emphasis on the problems particularly relevant to national requirements.

6. A committee was constituted by the Indian Council of Social Science Research under the programme of Studies on Alternatives in Health jointly with the Indian Council of Medical Research under the chairmanship of Prof. V. Ramalingaswami. Prof. Ramalingaswami submitted the report in 1980 and this report was published later in 1981 by ICSSR and ICMR under the title Health for All: An Alternative Strategy. It was intended to be a basic document to initiate a nation-wide debate on the subject.

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