NATIONAL HEALTH ACCOUNTS FOR INDIA: A CASE STUDY FOR KARNATAKA

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June 1998
Research Paper No.145

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Introduction

India spends a high proportion of its gross domestic product (GDP) on health care but still it is poor in terms of health outcomes as compared to countries at similar level of development. It is therefore, extremely important to understand the financial dimensions of the health sector in order to allow policy makers to make wise decisions in this sector. National Health Accounts (NHA) provide an important tool to describe and measure the flow of health expenditures outlining total spending, contributions to spending by different sources and claims on spending by different uses of funds. NHA thereby gives a consistent framework for modeling reforms and for monitoring the effects of financing health care. It helps in the optimal management of the allocation and mobilization of health resources.

What are National Health Accounts?

National Health Accounts describe the expenditure flows in the health sector (public and private) in a given time period in a manner that is relevant to policy makers in understanding how their sector operates. It details out in an integrated way *who pays, how much and for what,* separating who from what (Berman, 1997). In basic form it shows and links both public and private sources and uses of funds and can be represented in a matrix format. The three major groups that are described in NHA and are linked to each other are:

i) Entities describing the ultimate sources of funds;
ii) Entities that transfer resources between funding entities and actual providers, generally referred to as the financial intermediaries and financial agents; and
iii) Providers of services.

Objectives of NHA

National Health Accounts help in analyzing the total volume of expenditures in the health sectors in a given time period, work out the relative contribution of each source and how funds are used by different providers, different beneficiaries (socio-economic groups and geographical regions and demographic groups), factor inputs, disease groups, and type of services (preventive, curative etc.). Statements made regularly can help to understand country's own performance over a period of time thereby helping to improve the capacity of planners in making wise policy decisions in the area of health sector reforms. National Health Accounts done uniformly across different countries can also help in making inter-country comparisons and drawing lessons from other countries.

The SNA and NHA

The Standard National Accounts (SNA) are designed to measure and describe production in a manner, which is consistent and comparable over time and countries and aids macroeconomic analysis. The 1993 SNA recognized the constraints of the central framework and proposed extension of SNA called *satellite accounting.* The purpose of satellite accounting was to allow flexibility in the central framework and enable analysis for sectoral managers. However, the satellite accounts were still to maintain a clear and explicit linkage to the central framework and the focus was on valuing activities instead of expenditure as done in NHA. NHA represents an independent approach to estimating health expenditures in a manner most relevant to health sector managers. Though the two approaches are conceptually different it may be possible to map most of the NHA cells to satellite accounts. NHA approach has been

comparatively recent and still lacks the consistency and comparability, which is the hallmark of SNA. However, efforts are being made to develop a consistent framework for NHA, which would not only allow for better international comparisons but also remove the relative weakness of NHA in comparison to SNA. (Rannan-Eliya and Berman, 1997)

Health Expenditure Analysis in the Past

The first major national comparative study of health expenditure was done by Abel Smith for Sri Lanka and Chile in 1960's. After that several country specific studies were conducted under the WHO and World Bank auspices in the 1970's and 1980's. The WDR 1993 report 'Investing in Health' reported national health expenditures for 127 countries by public and private sources but with no estimates on uses. Further re-analysis of WDR data done for individual countries showed large differences for many developing countries in health expenditure estimations especially for the private sector. This strengthened the need for better health expenditure estimations.

Most of the earlier accounting framework emphasized on T-approach where expenditure by government and private sources were compiled separate from expenditures on type of programs or type of providers. This is mostly done in the OECD countries. Health expenditures were also computed for India for 1991 using this T-approach.

Before 1990s only USA had developed the system of NHA. The 1990's have seen significant increase in interest in NHA with countries like Mexico, Columbia, Thailand, Philippines, China, Bangladesh etc. all designing and developing their systems and using their results by the policy makers. Currently about 27 countries are involved in NHA activities. NHA is especially relevant for pluralistic health care systems such as India, as it systematically combines the sources and uses matrix.

Objective of the Study

The basic aim of the study is to develop a National Health Accounts framework for India. Using this framework, this paper proposes to describe the various sources from where the funds come from, how they flow through the various financial intermediaries, and finally how different providers and socio-economic groups use these funds. Karnataka, a state in India, is taken as a case study to understand, describe and measure these flows.

Definitions and Data

Health expenditures internationally are defined as all expenditures or outlays for prevention, promotion rehabilitation and care; population activities; medical relief programs with specific objectives of improving health for both individuals as well as populations. Activities with multiple objectives like nutrition, food subsidy programs, water supply and sanitation, which indirectly help to improve health are not included in health expenditures. Expenditures on medical education, training and research are also not included in NHA for many countries. The argument given is that much of the benefits accrue to the individuals trained. This argument may not go too far as expenditure on medical personnel help to meet the requirements of health care delivery systems. However, the expenditures on medical training would require access to different sources, besides public expenditures, which are not easily available for this study. Hence, these have not been included in the health sector expenditures. This narrow/ conventional definition is extremely important for making international comparisons in health care spending as well as in facilitating the policy makers to reprioritize the resources for Ministry of Health and Family Welfare.

Public Sector expenditures

The fiscal year for government of India runs from April to March. The audited statements for various ministries for different states are given in the budget documents of the states. The data were compiled from these budget documents by a team from National Institute of Public Finance and Policy (NIPFP). Most of the data related to health are available in the budget

documents for ministry of health and family welfare, but some expenditure done by other ministries on health related activities have also been added to this expenditure.

There are two major categories under which government expenditure is done: revenue expenditure and capital expenditure. The major heads under each of these are i) Medical and Public health and ii) Family welfare. The sub-major heads under medical and public health are i) Urban health services-allopathic; ii) urban health services- other systems of medicines iii) rural health services allopathic; iv) rural health services - other systems of medicine v) medical education, training and research vi) public health and vii) general. Under each of these categories and also under family welfare there are minor heads. These have been listed out in appendix 1. There are plan and non-plan expenditures under each of these minor-heads for which data have been compiled.

Private Expenditure data

For the present study we use the data for fiscal year 1993-1994. Though the public expenditure data for 1995 -96 were also available, but this was done in view of the fact that the data available from the last household survey for health is for 1993. This household survey of health care utilization and expenditure was carried out by the National Council of Applied Economic Research during May-June 1993, covering most of the states and union territories. The sample covered 18693 households: 6354 rural and 12339 urban. The data were collected for one-month recall period preceding the date of the interview. The survey collected information on morbidity, utilization of health services by type of providers, system of medicines, distance traveled to seek treatment, breakdown of expenditure for treated episodes in hospitals and non-hospitals, and also for untreated illness episodes. For the present study we use the data for Karnataka.

Since NHA identifies the expenditure flows from sources to uses, via financial intermediaries, the other sources of financing health care besides government and households, are firms- both public and private. For state-owned enterprises like railways, defense and post and telegraph some data are available from Health Information in India published annually by

ministry of health and family welfare. For expenditures by private firms on health no survey exist as of now. Some estimates can be made by some micro level studies, for example Duggal (1993).

Previous studies have shown that a very small proportion of total health expenditures comes from foreign sources. Further, most of the grants and loan from foreign agencies like World Health Organization, World Bank, ODA (UK). SIDA (Sweden), DANIDA (Denmark), German and Japanese assistance is used for technical and material support for programs run by the ministry of health and family welfare. Therefore government acts as a financial intermediary for foreign donations.

Health Insurance Data

The data on insurance- a financial intermediary for households, private firms and government are available from annual reports, government documents or from agencies themselves. For ESIS and CGHS, data from their annual reports and government documents are used, whereas for GIC data were obtained from the agency themselves.

Data on uses of funds from various sources will be estimated basically by using the household survey. Uses of funds by the providers can be divided into government providers and private providers. Government provider includes government hospitals, primary health centers (rural areas) and government dispensaries (urban areas). Private provider includes private hospitals, private dispensaries, charitable institutions, pharmacies and other traditional doctors.

Uses of funds by socio-economic categories are also defined to understand the distribution of various resources according to different income groups.

These data will be linked in a consistent framework provided by the NHA matrix. A software tool developed at Harvard school of Public Health will be used for the purpose. This will help to provide holistic picture of health sector and would help in monitoring effects of

changes in financing and provision, that is it will help to simulate macro level interventions in financing. In the following sections, each of the sources of funds will be described and how resources flow from these sources to providers via the financial intermediaries.

Health Financing by Sources and Uses

Health Financing by Government

Financing of health by government would refer to the amounts spent towards health care by central, state and union territory governments. It would also include revenues raised by local bodies, public sector enterprises, and autonomous and semi-autonomous institutions for financing health care. At the state level, these would be the revenues raised for financing expenditures incurred by the department of Health and Family Welfare and other ministries like i) Department of Social Welfare and Development ii) Department of Human Resource Development iii) Department of Agriculture and Rural Development iv) Ministry of Railways v) Ministry of Communications vi) Ministry of labor and vii) Ministry of Defense.

Ministries of Railways, Defense, Communications and Labor are included separately under the state-owned enterprises or central ministries and their revenues come from central government. Expenditures incurred by other departments, for health related activities are included under the Ministry of Health and Family Welfare expenditures.

Center, State and Local Government Responsibilities in Financing Health Care: Funding mostly originates from central government ministry of finance who directly allocate funds to Ministry of Health and Family Welfare at the Central level and also to state governments through center's Planning and Finance Commissions. The state government further allocates funds to state department of health and also to local governments. Further, there are inter-sectoral allocations of grants-in-aid and other earmarked funds from center to states. The flow of funds from various levels of government for different health activities is shown in figure 1.

Center and state governments finance different components of health expenditures. The areas of operations are divided into union list, state list and concurrent list. Although health is a

state subject under the constitution, the Ministry of health at central level formulates comprehensive health plans in line with the national health policy. The Union Ministry of Health and Family Welfare is responsible for implementation of various programs like family welfare, prevention, control and eradication of major diseases, immunization etc. The Central Government Health scheme is also financed by the Central Government. Items like public health, hospitals and insurance are financed out of state government budgets and items having wider ramifications of national level like population control, family planning, medical education, etc. are divided between the center and state budgets, that is they are included in the concurrent list.

The budgeting of central and state government expenditures take place within the framework of five-year plan. 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. Though the major finances for states come from the center, it is primarily the state's responsibility to provide health care. 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. 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. The allocation between plan and non-plan expenditure for Karnataka by level of care for various years is given in Table 1. It can be seen that for medical and public health activities, which account for over 60 percent of all health expenditures, more than 75 percent of the expenditures are non-plan where as for family welfare more than 90 percent of the expenditures are plan. Within medical and public health, it is found that state incurs more non-plan expenditures for urban and rural health services, but for public health activities the distribution of expenditures between plan and non-plan is more equal. Further, table 1 shows that after 1992, the percentage of non-plan expenditures has been declining marginally for medical and public health activities. With increasing plan expenditures in state budgets for medical and public health activities, there is greater autonomy and decision making for the states.

Transfers from central government to various financing agents

The State department of health receives its funds from the State Government general allocations to various ministries and also from Union Ministry of Health and Family Welfare as tied grants for centrally sponsored schemes.

The family planning and immunization programs are fully centrally funded and disease control programs are partially financed by the center. The expenditure on these national programs is recorded in the state budgets, while the centrally financed component is also recorded in the central budget as the grants to the states. In order to find the flow from central government to state governments, expenditure on these programs is subtracted from the state government revenue expenditure and is shown as the central allocation to state department of health. This is shown in sources to financing agent matrix as an amount equal to Rs. 615.56 million for Karnataka for 1993-94 (table A). Further, central government also spends directly for the central government health scheme (CGHS) in the state. These are calculated as the CGHS expenditure in the state directly from annual reports of CGHS and are equal to Rs. 25.8 million. The non-governmental and voluntary organizations also receive funds/grants/donations from Central and State governments. On the basis of available data, this allocation could not be worked out and hence by following a backward process, revenues from government to NGOs were worked out as 14.7 million (discussed later under NGOs). These have been assumed to be totally coming from the central government as the break down between the central and state government could not be worked out with the available data. Further, central government also allocate funds to central ministries like railways, defense, post and telecommunication etc. who in turn allocate part of their revenues for health activities. These revenues still need to be worked out. These central government revenues account for ------ percent of the total revenues in the health sector (table A).

Organization of State Department of Health and Family Welfare Budget

The state government receives its funds from center as ‘untied transfers’ which in turn allocates to the state department of health. State governments also raise their own tax and non-

tax revenues. These account for approximately one-third of the total revenues raised by the government (Garg, 1998). State department of health also receives funds as tied grants from the union ministry of health and family welfare for centrally sponsored schemes. As indicated above, these have been taken as a transfer from Central government to state department of health in the sources to financing agent matrix.

The revenues for the state department of health are calculated from the audited accounts of government from the budget documents. Expenditures on medical education and training are not included as they record expenditure on medical schools, colleges etc. imparting medical education and nursing education. Expenditures on hospitals attached to Medical Colleges are recorded under 'Hospitals and Dispensaries' (appendix 1). Expenditures under "training" for family welfare activities and public health activities are also excluded, as these are taken as not directly improving health.

The state governments incur both capital and revenue expenditures. Under the capital expenditure government incurs only plan expenditure as the non-plan component is zero. For revenue expenditure there is a higher non-plan component as compared to plan expenditure. The percentage of health expenditure for different levels of care is given in Table 2. It can be seen that percentage of health expenditure on medical, public health and even family welfare are declining and they are increasing under the general category. For 1993-94, the composition of expenditure between Medical, Public health and Family Welfare given in table 2 shows that 63 percent of the expenditure is used for medical and public health activities, out of which 5 percent is used for public health. About 25 percent of expenditure are under the general category, which includes transfers to local government and is used for both medical and public health activities. The rest 12 percent is used for family welfare activities.

Further, the break up of government expenditure by economic categories shows that expenditure on wages and salaries accounts for 22 percent of total health expenditures. If expenditure under the 'general category', which mostly includes transfers to local government and comprise basically salary expenditure are excluded then expenditure on salary and wages

work out to be 41 percent for medical and public health and 33 percent of all health expenditures (that is including family welfare). For medical services 44 percent is spent on salaries and wages as compared to 22 percent in case of public health and 6 percent in case of family welfare (Table 3). Most of the expenditures under non-plan budgets are used for salaries. Expenditure on machinery and equipment, material and supplies, which are basic to improving health care and improving the efficiency of services in hospitals and dispensaries, is still very low. The percentage of expenditure on these categories is almost negligible in case of rural health services.

State department receives revenues from patients for hospital and dispensary services in both rural and urban areas, from ESIS, from CGHS, from drug manufacturers, from sale of sera/vaccine, fees and fines, etc. It has been estimated that receipts by government form about 5 percent of total government expenditures. Most of these receipts are ESIS and CGHS transfers. In our analysis these have been dealt separately and have therefore been subtracted from government expenditures (see under respective sections of ESIS and CGHS). Household non-drug expenditure on government hospitals and clinics should be taken as receipts of state department of health (SDH) from households. However, these go to SDH only through government hospitals and clinics. These are therefore shown as receipts from households to government hospitals and clinics in the financing agents to provider matrix (table B).

The state department of health also transfers money to municipal bodies/local government as tied grants for health related activities. These have been obtained from SDH budget in the category “other expenditures” under “General expenditures”. The figure has been calculated to be Rs. 1330.5 million and is assumed to be spent municipal/local hospital and facilities. These expenditures seem to be increasing implying greater resources being spent at rural/local level. Also, World Bank (1997) shows that four-fifth of the health budget meant for rural areas is passed on to Zila Parishads (local governments).

Further, SDH incurs 12.5 percent of the total expenditures on ESIS. This has been estimated as 3.56 million. The details are given under the ESIS scheme.

Together, the state department of health revenues amounts to Rs. 2828.43 million, which are about ---- percent of the total revenues.

Local Government as a Source

While the federal structure of Government in India is based on a significant devolution of taxing powers to the states, supplemented by their statutory right to their share in major central taxes, local bodies have very limited taxing powers or statutory rights (World Bank, 1997). Local authorities have very limited flexibility as most of the grants from states to local bodies are specific purpose grants and are mostly used for covering salaries of staff in rural health centers. The estimate of state government transfers to municipal governments is 1330.54 million, which are about 47.2 percent of state government revenues that are used for health activities. The local authorities also raise some of the revenues for health activities and these need to be estimated.

Non-Governmental Organizations as a Source and Financing Agent

Non-Governmental Organizations (NGOs) are generally considered to be not-for-profit organizations who raise some revenues through user fees and employment schemes, contributions and donations from private individuals, and government. These funds are managed by NGO's who provide health services mostly at the local level/ rural level. NGOs are believed to understand needs of community and are considered more innovative and flexible in their approaches. 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.

In view of the lack of any existing data for NGOs, the revenue sources and expenditure for NGOs are calculated using a backward approach. Using the household data, the expenditure by households on charitable institutions for 1993-94 for Karnataka was obtained. These were then applied to the ratios of revenue and cost structure obtained for one of the NGOs (Ford foundation, 1994). This helped to calculate the revenue received by the NGOs

from the government as grants and from their own schemes. It can be seen from table A that NGOs raise Rs. 0.2 million from their own sources, receive Rs. 14.7 million from government and Rs. 5.24 million from households. NGOs, therefore act as both source of finance as well as financial intermediary for health activities. However, their own percentage contribution in total health sector finances is almost negligible.

Financing of Health Care by the Corporate Sector: Private and Public Sector Enterprises

Past estimates of private employer share in total health expenditure vary from 1.2 percent (WDR, 1993) to 8 percent (Reddy, 1994). Private organized sector employees earning below a certain salary have to be mandatorily covered by their employers under the Employee State Insurance Scheme unless they provide better medical benefits than ESIS. In case of Karnataka this expenditure by corporate sector on ESIS scheme has been estimated to be Rs. 140.9 million on the basis of the ESIS income (discussed later). 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. Most companies have their insurance plan with either of the four subsidiaries of General Insurance Corporation (GIC) or sometimes directly with the hospitals also.

The estimates for Karnataka for private firms' revenues to GIC have been estimated from the premiums received by GIC in Karnataka. These premiums have been apportioned as revenues arising from private firms, public firms and households. Foundation for Research in Community Health (Duggal, 1993) estimated that a total of 27 percent of the sample companies

(public and private) opted for GHIP, in the private sector 32 percent companies covered their employees under the scheme. While the public sector incurred Rs. 1378 per employee under this scheme, the private sector incurred Rs. 571 per employee. On the basis of the employees covered in organized sector in Karnataka, it can be estimated that total expenditure by private and public firms under this scheme to be Rs. 24 million & Rs. 15.5 million respectively.

ii) Reimbursement of Actual Expenses: Under this scheme, a company reimburses the actual medical expenses incurred by its employees. Some firms 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.

According to Duggal (1993) 35.3 percent of the firms covered their employees under this scheme with 51 percent being covered from the public sector and rest 49 percent from the private sector. Expenditure per employee in public firms was estimated to be Rs. 1869 where as for private firms it was Rs. 533. On the basis of the estimates of the total employees under this scheme in Karnataka, it was estimated that total expenditure for public sector employees under this scheme to be Rs. 160.7 million and for private sector employees to be Rs. 44.8 million.

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.

Only 9.7 percent of the sample companies opted for this scheme, out of which 26.5 percent are in public sector and 73.5 percent are in private sector (Duggal,1993). Expenditure per employee in public firms is Rs. 2239 and in private firms is Rs. 460.9. Based on the

estimate of employees covered under this scheme in Karnataka, total expenditure for public companies work out to be Rs. 26.87 million and Rs. 15.7 million for private firms.

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 firms, which have large employee strength.

It was estimated that 46.6 percent of the employees were covered under this scheme of owned hospitals and clinics out of which 31 percent are in public sector and 69 percent are in private sector. Expenditure per employee is estimated to be Rs. 1060 and Rs. 407 in public and private sector respectively. On the basis of .22 million employees covered under this scheme in Karnataka, total expenditure by public firms work out to be Rs. 74.2 million and Rs. 61.1 million for private firms.

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 varies in public and the private sector. So far as types of medical benefits provided to employees is concerned, in the pubic sector, maximum expenditure is on reimbursement/ claims followed by own hospital/clinic. In the private sector, expenditure on ESIS is maximum followed by own hospital/clinic and claims.

This is understandable as private sector likes to provide only statutory benefits. The system of lump sum payment is least common among both private and public sector companies (Duggal 1993). On the basis of reimbursements under these various schemes, it is estimated that total revenues for providing medical care in public sector are Rs. 340.82 million and for private sector it is Rs. 212.2 million. These are shown in sources to financing agent matrix (table A).

Employee State Insurance Scheme:

ESIS was established in 1948 as an insurance system providing both cash and medical benefits to industrial workers in organised sector. ESIS functions as a form of compulsory health insurance where employers in the factory sector are legally bound to provide health coverage to its employees earning below Rs. 6000/- per month. (The limit was changed from Rs. 3500/- to Rs. 6000/- from January 1997). The main purpose of ESIS is to protect the industrial workers from occupational risks, sickness, gynecological problems etc. by providing them comprehensive coverage on a contributory basis. It is managed by the Employees State Insurance Corporation (ESIC), a government enterprise.

ESIS provides medical and cash benefits through well established hospitals and medical staff. As on 31st March 1996, there were 124 ESI hospitals with 23,470 beds, 1440 dispensaries and 9,212 medical officers/practitioners. The number of factories and establishments covered under the scheme was 190,944 units in 629 centers covering 66,13,400 employees(Annual Report, ESIS 1995-96). Medical care covers out-patient treatment, specialist consultation and hospitalization for the insured person and his family members.

This scheme is mainly financed by contributions from employers and employees. The employers contribute 4 per cent of the wages for the employees covered under the scheme and the employees contribute 1.5 per cent of their wages towards the scheme. Employees upto 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 a minimum of 12.5 per cent of the total expenditure on medical care in their respective states. The total

income and expenditure during the year 1993-94 for All India are shown in table 4. Using the All India proportions, figures for Karnataka have been estimated and flows from sources to financing agents are given in Table A.

Calculation for ESIS Income and Expenditure: For calculating the ESIS sources of incomes for Karnataka an indirect method was used. From the state budget documents we know that the expenditure under the head “Employee State Insurance Scheme”, records expenditure incurred in hospital and dispensaries in connection with scheme. This expenditure is basically the medical expenditure incurred by the corporation but is reported under the government budget even though the expenditure incurred on provision of medical benefit is shared by the corporation and respective state government in the ratio of 7:1 within the prescribed per capita ceiling (ESIS, 1994).

The ‘Expenditure and Income Account Statement’ for ESIS for 1993-94 shows that expenditure on medical benefit is 48.73 percent of total expenditure at All India level. This percentage is equated with Karnataka government expenditure on medical benefit and gives a total expenditure for Karnataka government to be 441.3 million. If we use expenditure per employee ratio at All India level and multiply with the number of employees in ESIS in Karnataka (0.426 million) then we get a figure of 445.12 million which is very close to the earlier estimate. The total expenditure and income for Karnataka for 1993 of 441.3 million is dis-aggregated into medical benefits, cash benefits, administrative expenses and other expenses. In NHA estimation only medical benefits are included as these imply health improvement. Expenditure on medical benefits is calculated by adding “medical benefit”, “administrative expenses” (apportioned for medical benefits) and “other expenditure” (which is mainly used for depreciation, repairs and maintenance and rates and taxes for the hospitals/dispensaries). All India proportions are used to divide the total expenditure into these categories and it works out that 271.2 million are spent on providing medical benefits to the employee (table 4). These are shown as the expenditure of the ESIS corporation on ESIS hospitals and dispensaries in the ‘financing agent to provider matrix’. Expenditure on “cash benefits” and “reserves” of ESIS are left out as these do not directly help to improve health. This total expenditure on “medical

benefit" would figure in 'sources to financing agents matrix' as revenues from various sources. One-eighth of the total expenditure on medical benefit is incurred by the state government, which equals 33.9 million and is shown as the revenues from the state government to the ESIS corporation. Further, ESIS receives money from employers, employees, and the corporation also has its own reserves. The All India proportions show that 71.7 percent of total income comes from the employers and employee contribution, which amounts to Rs 194.6 for medical benefits. The employer contribution will be Rs. 129.7 million and Rs. 64.9 million are contributed by the households. The rest of the expenditure of Rs. 42.7 on medical benefit is done from the ESIS income comprising interest and dividends, rent and taxes and other income of the corporation. These are shown in the sources to financing agent matrix.

Central Government Health Scheme (CGHS)

The Central Government Health Scheme was introduced in July, 1954 as the `Contributory Health Scheme' in Delhi with a view to provide comprehensive medical care facilities to the Central Government employees and members of their families. The scheme has been extended to 16 major cities and covers over 4 million central government employees and other entitled persons, like employees of certain autonomous organisations, retired central government employees, freedom fighters and members of general public in certain specified areas.

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, 34 Homeopathic dispensaries, 3 Yoga centers, 2 Sidha dispensaries and 8 Unani dispensaries in the cities where the scheme is in operation (Annual Report, CGHS, 1994-95). All government

hospitals such as Army, Naval, Railways, ESI and state government/municipal hospitals are recognized under CGHS.

During the year 1994-95, the expenditure of CGHS was Rs. 1438 million. Contributions received during the same year were 194 million, which on the average, is less than Rs. 50 per employee per year. Most of the expenditure of the CGHS is met by the Ministry of Health and Family Welfare, Government of India. The premiums are calculated on the basis of the basic pay in case of central government employees and is a fixed amount for other members.

The central government health scheme figures as financing agent in the sources to FA matrix. The total expenditure under the CGHS scheme for Karnataka works out to be Rs. 30.97 million, out of which 5.15 million is the contribution from households as premiums for the scheme. This is calculated on the basis of the contribution per beneficiary multiplied by the number of beneficiaries in Karnataka. The rest of the Rs. 28.8 million is the revenue from the central government to CGHS. On the basis of the cost per visit and number of visits in different dipensaries/clinics – ayurvedic, unani, homopathic and siddha, the total expenditure for government owned clinics (ayurvedic) and traditional practitioners (other system of medicine) are worked out. It is estimated in FA to provider matrix that Rs. 26.6 million are spent on government owned clinics (ayuvedic), Rs. 3.2 million for traditional practitioners and the balance Rs. 1.2 million are spent on government hospitals from CGHS funds (table B).

If one considers the distribution of expenditure by various line items one finds that 47.7 percent of the Karnataka CGHS expenditure goes towards salaries, 42.2 percent is used for material and supplies and 10.1 percent is for other expenditures. This shows that higher percentage is spent in Karnataka on salaries as compared to All India average where 28.8 percent of CGHS expenditure is on salaries, 61.8 percent on material and supplies and 9.4 percent on other expenditure.

General Insurance Corporation of India

The general insurance corporation (GIC) is a public sector company offering health insurance to individuals and groups and works almost like a private insurance company. It acts as a financing agent receiving premiums from households and firms covering hospitalization and domiciliary hospitalization expenses for groups as well as individuals. The premiums vary from Rs. 200 to Rs. 1,300 per insured per annum under the MEDICLAIM policy. Sub limits on expenses are stipulated viz. hospital room charges, nurses fee, operation charges, doctor's fee, diagnostics, etc. All pre-existing ailments and other ailments relating to eyes, dental, asthma, etc. are excluded. Maternity is covered only with special premium. In 1993-94, the total premium received by the corporation was Rs. 974.3 million and 471.4 were incurred as claims giving a claim premium ratio of only 48.4 percent. During the same period 1.28 million people were covered and .44 million policies were issued. The per capita premium worked out to be Rs. 761.20. As the figures for premiums and claims are not given by states, it is calculated by assuming that the All India proportions for persons covered. These ratios can be applied to Karnataka and after calculating the number of persons covered, these are multiplied by per capita claim and premium ratios to work out the Karnataka premium to be Rs. 50.9 million. These have to be apportioned between firms and households. As Rs. 29.15 million are spent on GHIP by the firms, the balance of Rs. 11.75 million are given by the households as premiums.

GIC also offers JAN AROGYA BIMA POLICY more targeted towards the poor. The policy provides for reimbursement of medical expenses toward hospitalization and domiciliary hospitalization expenses upto a limit of Rs. 5000 per annum with no inner limits. Premiums vary from Rs. 240 to Rs. 380 per annum for a family of two adults and two dependents. The policy was introduced in July 1996 and therefore has not been considered for this analysis.

Financing by households

It has been indicated earlier that data in respect of financing and utilization of health services were collected by NCAER for 1993-94. These were collected for 6354 rural and 12339 urban households across the country for one-month recall period during May-June 1993. For

Karnataka data were collected for 6461 households. Data related to morbidity, health care utilization and health expenditures for treated episodes in hospitals and non-hospitals and also for untreated illness episodes. Data on expenditure by households for rural and urban areas and by different sources of treatment are given in table 5.

It has been estimated that households spend Rs. 12747.2 million as out-of-pocket expenditures for outpatient and inpatient treatment and on drugs. Further they also pay premiums for private insurance for covering them for some hospitalization expenses. This has been estimated to be 11.75 million for Karnataka. Rs. 64.87 million are paid by the households as a contribution towards ESIS funds and Rs. 5.15 million are contributed to CGHS. Households also pay to NGO's as either fee-for-service or as premiums for the services provided by them. The total revenues emerging from households for financing health care works out to be Rs. 12834.25 million which is ---- percent of the total revenues.

Financing Agents to Providers

The revenues from SDH are mainly used to finance Government hospitals, government clinics, for drugs and traditional practitioners. These have been estimated from the budget documents. The respective percentages are -----. Municipal government revenues will be used to finance again government hospitals, clinics and pharmacies. These are divided in the same proportion as for the state governments.

For CGHS expenditure are done on government clinics and hospitals and have been estimated on the basis of costs per visit and number of visits (described in the section above on CGHS). Some reimbursements are made for private treatment also. However, this could not be estimated from the available data and the entire expenditure is clubbed under government.

The entire revenues of ESIS scheme are put under ESIS hospitals and clinics, though part of this expenditure would also be on drugs. This has , however not been separately estimated.

Public and private firms spend on ESIS scheme, for their own hospitals/clinics, for giving lump-sum payment, reimbursing claims and for GHIP. Their revenues are divided among providers –private and pharmacies in the same proportions as for the households. Public firms' expenditure on owned clinics are assumed to be under government providers, hence this figure of Rs. 74.2 million is put under government hospitals.

GIC's revenues of Rs. 50.9 million are partly spent (49 percent) on making payment for hospitalization and are therefore put under private hospitals. The rest, which is kept by GIC is put under others.

Households out of pocket expenditures are distributed between government hospitals clinics, private hospitals, clinics, charitable hospitals and pharmacies, according to the proportions given in table 5.

Appendix 1

List of major and minor heads of public expenditures

Revenue Expenditure on Health and Family Welfare

Major /Sub Major Heads
Minor Heads

0210 Medical and Public Health

01 Urban Health Services-Allopathy
- 001 Direction and Administration
- 102 Employees State Insurance Scheme (5)
- 103 Central Government Health Scheme
- 104 Medical stores Depot (2)
- 108 Departmental Drug Manufacture (3)
- 109 School Health Scheme
- 110 Hospitals and Dispensaries (1)
- 200 Other Health Schemes
- 800 Other Expenditure

02 Urban Health Services-Other systems of medicine (6)
- 101 Ayurveda
- 102 Homeopathy
- 103 Unani
- 104 Siddha
- 200 Other Systems

03 Rural Health Services-Allopathy
- 101 Health Sub-centres
- 102 Subsidiary Health Centres
- 103 Community Health Centres
- 110 Hospitals and Dispensaries
- 800 Other Expenditure

04 Rural Health Services-Other Systems of medicine (6)
- 101 Ayurveda
- 102 Homeopathy

103 Unani
104 Siddha
200 Other Systems

05 Medical Education, Training and Research (4)
101 Ayurveda (10)
102 Homeopathy (10)
103 Unani (10)
104 Siddha (10)
105 Allopathy (105)
200 Other Systems (10) (11)

06 Public Health
001 Direction and Administration
003 Training
101 Prevention and Control of Diseases (7)
102 Prevention of Food Adulteration
104 Drug Control
106 Maufacture of Sera/Vaccine (8)
107 Public Health Laboratories (9)
112 Public Health Education
113 Public Health Publicity
200 Other Systems (11)
800 Other Expenditure

80 General
004 Health Statistics and Evaluation
798 International Co-operation
800 Other Expenditure

Notes:
(1) This minor head will record expenditure on medical relief provided to general public through hospitals, dispesaries, primary health centres etc.
(2) This minor expenditure will record expenditure on establishment of Medical Stores Depots and also transections connected with purchase of medicines, drugs, medical instruments and equipment etc. if Medical stores Depots charge for supplies made to hospital and dispensaries etc.
(3) This minor head will include expenditure on departmental manufacture of common pharmaceutical preparations.
(4) This sub-major head will record expenditure on medical schools colleges etc. imparting medical education and nursing education. Expenditure on hospitals attached to Medical Colleges will be recorded under Hospitals and Dispensaries below the sub-heads '01' or '03' as the case may be.
(5) This minor will record expenditure incurred in hospitals, dispensaries etc. in connection with Employees State Insurance Scheme.
(6) The minor heads under the sub-major heads '01' and '03' be opened as sub-heads, as deemed necessaryunder the minor heads under these sub-major heads, '02' and '04'.
(7) Prevention and control of each major disease like Cholera, Leprosy, Malaria, Filaria etc. to be recorded under distinct sub heads with suitable detailed heads thereunder.
(8) Will include expenditure on Pasteur Institute.
(9) Will include expenditure on chemical Examiner.
(10) Divided under following sub-heads:
(I) Education (includin education in pharmacy, (ii) Training
(iii) Research and Evaluation, (iv) Other Expenditure
(11) This includes Yoga also.

Major/ Sub-Major Heads
Minor Heads

2211 Family Welfare

001 Direction and administration (1)

003 Training (6)
004 Research and Evaluation (6)
101 Rural family Welfare services (7)
102 Urban Family Welfare Services (8)
103 Maternity and Child Health (2)
104 Transport (3)
105 Compensation
106 Mass Education (5)
108 Selected India Programmes (including India population project)
190 Assistance to Public Sector and other Undertaking
200 Other Services and Supplies (4)
798 International Co-operation
800 Other expenditure

Notes:

(1) This minor head will record expenditue of (1) State Level Organisation (ii) City Family Planning Bureaus and District Family Planning Bureaus in the states. In the Centre the expenditure under the following heads is recorded under this Head: (I) Technical Wing at Headquarters; (ii) Regional Health Offices; and, (iii) Other Offices.

(2) This head will include expenditure on immunisation of infants and pre-school children and expectant mothersand; (ii) Supply of surgical instruments to welfare planning centres; (iii) Maintenence of beds and static sterilisation units; (iv) Conventional contraceptives; (v) Post partum centres; (vi) Supply of surgical equipment to selected hospitals; (vii) Construction of sterilisation theatres; (viii) Selected Area Programs; (ix) Intensive District Programs; and (x) establishment of additional beds.

Central Sector

(I) expenditure on family Planning in Railways, P&T and Defence; (ii) Nirodh scheme; (iii)Central Family Planning core Doctors; (iv) Awards, and (v) Vehicles etc.

(5) this will cover expenditure on (I) Mass education programs; (ii) Mass mailing scheme; and, (iii) Audio-visual equipments and expenditure incurred by the Ministry of Information and Broadcasting.(6) This will include expenditure under the folllowing items:

State Sector

(I) Regional Family Planning centres in states; (ii) Training of A.N.M.s and Dais and Local Heakth Visitors; (iii) Training of Homeopathic and I.S.M. Practitioners; (iv) Teaching of Family Planning in medical colleges; and Demographic Research Centre.

Central Sector

(I) Central Family Planning Units; (ii) Training of Personnel through I.M.A.; (iii) Stipends to medical students; (iv) Family Planning training Centres; (V) Expenditure on L.S.M.and Homeopathy; and (vi) Experimental Projects.

(7) This will have the following sub-heads:

(I) Village Health Guides; (ii) Post-Partum Centres.

(8) This will include expenditure on Post Partum Centres.

(b) Health and Family Welfare

Major/Sub-Major Heads

Minor Heads

4210 Capital Outlay on Medical and Public Health

01 Urban Health Services
- 102 Employees Health Insurance Scheme
- 103 Central Government Health Insurance Scheme
- 104 Medical Stores Depot (1)
- 108 Departmental Drug Manufacture (2)
- 109 School Health Scheme
- 110 Hospital and Dispensaries (will include Pharmacy)(4)
- 200 Other Health Services
- 800 Other Expenditure

02 Rural Health Services
- 101 Health sub-Centres
- 102 Subsdiary Health Centres
- 103 Primary Health Centres
- 104 Community Health Centres
- 110 Hospitals and Dispensaries (4)
- 800 Other Expendiure

03 Medical Education Training and Research
- 101 Ayuurveda
- 102 Homeopathy
- 103 Unani
- 104 Siddha
- 105 Allopathy
- 200 Other System

04 Public Health
- 101 Prevention and Control of Diseases
- 106 Manufacture of Sera/Vaccine
- 107 Public Health Laboratories(3)
- 112 Public Health Education
- 200 Other programmes

80 General
- 190 Investment in Public Sector and other Undertaking
- 800 Other expenditure

Notes:

(1) See note (2) under the Major Head 2210

(2) See note (3) under the Major head 2210

(3) Each Laboratory will be recorded under distinct sub-head with suitable detailed h heads.

(4) These Minor Heads will include “Medical Relief”.

4211 Capital Outlay on Family Welfare
- 101 Rural Family Welfare Service
- 102 Urban Family Welfare Service
- 103 Maternity and Child Health
- 106 Services and Supplies
- 108 Selected Area Programs
- 190 Investment in Public sector and other undertakings
- 800 Other expenditure

6210 Loans for Medical and Public Health

01 Urban Health Services
- 201 Drug Manufacture
- 800 Other Loans

02 Rural Health Services
03 Medical Education Training and Research
101 Ayurveda
102 Homeopathy
103 Unani
104 Siddha
105 Allopathy
200 Oother Systems
04 Public Health
106 Manufacture of Sera/Vaccine
107 Public Heath Laboratories
282 Public Health
800 Other Loans
80 General
800 Other Loans

6211 Loans for Family Welfare

190 Loans to Public Sector and other Undertakings
800 Other Loans

Figure 1

Flow of funds from Different Levels of Government for Various Health Activities

Table 1

Allocation of Karnataka Government Expenditure by Level of Care: Various Years

	Capital Expenditure			Revenue Expenditure			Total Revenue+Capital Expenditure				
ITEMCODE	Plan	Non-Plan	Total	Plan	Non-Plan	Total	Plan	Plan %	Non-Plan	Non-Plan %	Total
1975											
Medical & Public Health	183.8	0.0	183.8	294.5	2067.9	2362.4	478.4	18.8	2067.9	81.2	254
Public Health	90.3	0.0	90.3	187.7	244.3	432.0	278.1	53.2	244.3	46.8	52
General				0.0	3.9	3.9	0.0	0.0	3.9	100.0	
Family Welfare	2.7	0.0	2.7	570.2	0.0	570.2	572.9	100.0	0.0	0.0	57
1980											
Medical & Public Health	125.9	0.0	125.9	722.1	3680.6	4402.7	848.0	18.7	3680.6	81.3	452
Public Health	4.7	0.0	4.7	326.3	427.0	753.3	330.9	43.7	427.0	56.3	75
General				0.0	7.4	7.4	0.0	0.0	7.4	100.0	
Family Welfare	0.0	0.0	0.0	803.2	0.0	803.2	803.3	100.0	0.0	0.0	80
1985											
Medical & Public Health	477.3	0.0	477.3	2508.2	7553.2	10061.4	2985.5	28.3	7553.2	71.7	1053
Public Health	102.3	0.0	102.3	1234.1	840.0	2074.1	1336.4	61.4	840.0	38.6	217
General				0.0	7.1	7.1	0.0	0.0	7.1	100.0	
Family Welfare	102.3	0.0	102.3	2143.3	126.1	2269.4	2245.6	94.7	126.1	5.3	237
1990											
Medical & Public Health	163.7	0.0	163.7	3848.6	14507.4	18356.0	4012.2	21.7	14507.4	78.3	1851
Public Health	15.7	0.0	15.7	949.3	933.1	1882.4	965.0	50.8	933.1	49.2	189
General				2291.4	4894.7	7186.1	2291.4	31.9	4894.7	68.1	718
Family Welfare	736.2	0.0	736.2	4133.8	183.4	4317.2	4870.0	96.4	183.4	3.6	505
1991											
Medical & Public Health	167.1	0.0	167.1	4168.4	16306.1	20474.5	4335.5	21.0	16306.1	79.0	2064
Public Health	23.3	0.0	23.3	759.2	1012.8	1772.0	782.5	43.6	1012.8	56.4	179
General				2418.7	6081.1	8499.8	2418.7	28.5	6081.1	71.5	849
Family Welfare	489.5	0.0	489.5	3516.6	310.4	3827.1	4006.2	92.8	310.4	7.2	431
1992											
Medical & Public Health	293.2	0.0	293.2	3938.9	20211.5	24150.4	4232.1	17.3	20211.5	82.7	2444
Public Health	17.4	0.0	17.4	790.5	1364.4	2154.9	807.9	37.2	1364.4	62.8	217
General				1966.2	7102.0	9068.2	1966.2	21.7	7102.0	78.3	906
Family Welfare	234.5	0.0	234.5	5038.2	348.4	5386.6	5272.7	93.8	348.4	6.2	562
1993											
Medical & Public Health	674.9	0.0	674.9	5292.0	24856.2	30148.2	5966.9	19.4	24856.2	80.6	3082
Public Health	18.4	0.0	18.4	1068.6	1418.3	2486.9	1087.0	43.4	1418.3	56.6	250
General				2895.7	10011.4	12907.1	2895.7	22.4	10011.4	77.6	1290
Family Welfare	37.3	0.0	37.3	5497.7	374.6	5872.3	5535.0	93.7	374.6	6.3	590
1994											
Medical & Public Health	998.8	0.0	998.8	6259.9	26560.0	32819.9	7258.8	21.5	26560.0	78.5	3381
Public Health	0.0	0.0	0.0	1100.6	1552.2	2652.8	1100.6	41.5	1552.2	58.5	265
General				3346.7	9958.7	13305.4	3346.7	25.2	9958.7	74.9	1330
Family Welfare	25.7	0.0	25.7	5941.7	362.5	6304.2	5967.5	94.3	362.5	5.7	633

Source: Budget Documents – various years

Table 2

Percentage Distribution of Health Expenditure by Level of Care for Karnataka

	1974-75	1979-80	1984-85	1989-90	1990-91	1991-92	1992-93	1993-94
Medical & Public Health	81.5	84.8	81.6	60.2	61.7	62.5	62.1	63.3
Urban Health Services	38.8	44.0	40.8	23.5	23.3	25.1	22.1	26.1
Rural Health Services	15.9	15.2	13.9	0.7	0.8	0.9	0.7	0.8
Medical Education, Training & Research	7.1	9.5	7.3	6.5	6.8	7.7	8.3	6.5
Public Health	16.7	14.2	16.8	6.2	5.4	5.6	5.0	5.0
General	0.1	0.1	0.1	23.4	25.4	23.2	26.0	24.9
Family Welfare	18.3	15.0	18.4	16.4	12.9	14.4	11.9	11.8
Total Medical Public Health & Family Welfare	100	100	100	100	100	100	100	100

Source: Budget Documents: Karnataka - Different years

Table 3

Percentage Distribution Of Revenue Expenditure On Medical, Public Health And Family Welfare Activities By line Items (Inputs): Karnataka- 1993-94

	Salaries & Wages	Travel Expenses	Office Expenses	Rent, Rates & Taxes	Machinery & Equipment	Material & Supplies	Others*	Total
A: MEDICAL								
01 URBAN HEALTH SERVICES-Allopathy	43.6	0.4	11.4	0.0	4.3	17.9	22.4	100
02 URBAN HEALTH SERVICES-OSM	67.3	0.2	16.4	0.0	0.0	0.0	16.0	100
03 RURAL HEALTH SERVICES-ALLOPATHY	14.0	0.2	4.0	0.0	0.0	1.1	80.6	100
04 RURAL HEALTH SERVICES-OSM	54.5	0.4	4.2	0.0	0.4	0.0	40.4	100
05 MEDICAL EDUCATION, TRAINING & RESEARCH	46.5	0.3	7.1	0.4	0.7	0.4	44.5	100
TOTAL (A: MEDICAL)	**43.9**	**0.3**	**10.4**	**0.1**	**3.4**	**13.7**	**28.2**	**100**
B: PUBLIC HEALTH	22.3	0.3	3.8	0.0	0.2	0.4	73.0	100
80 GENERAL	0.0	0.0	0.0	0.0	0.0	0.0	100**	100
TOTAL (MEDICAL & PUBLIC HEALTH)	**24.4**	**0.2**	**5.7**	**0.0**	**1.8**	**7.0**	**60.9**	**100**
C: FAMILY WELFARE (2211)	6.4	0.1	0.3	0.0	10.7	0.0	82.5	100
TOTAL OF THE MAJOR HEADS(A+B+C)	**21.5**	**0.2**	**4.8**	**0.0**	**3.2**	**5.9**	**64.4**	**100**

Source: Budget Document: Karnataka, 1993-94

Notes: * 'Others' include expenditure on motor vehicles (purchase, maintenance etc.), stores and equipment, scholarship and stipends, and in case of 'general' category it includes transfers from state government to municipal corporations/ local bodies.

Table 4
Income and Expenditure Account for ESIS for 1993-94: All India

Table 5
Spending by households for different types and sources of treatment

Key of Words

CGHS – Central Government Health Scheme
ESIS – Employee State Insurance Scheme
GDP – Gross Domestic Product
NHA – National Health Accounts
NGOs – Non-Governmental Organisations
SDH – State Department of health
FA - Financing Agent

References

Duggal, !993

ESIS (1994) Annual Report 1993-94

Ford Foundation (1994): Anubhav Project

Garg, 1998

(Reddy, 1994).

World Bank (1997), “India New Directions in Health Sector Development at the State Level: An Operational Perspective”, Population and Human Resources Division, South Asia Country Department II, Report No. 15753-IN, February 11.

(WDR, 1993)