NHA Training Manual

National Health Accounts

Training Manual for Implementing NHA in India

In Collaboration with WHO Country Office for India and
Ministry of Health and Family Welfare, Government of India

The Institute of Health Systems

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Foreword

The Institute of Health Systems (IHS) is pleased to present the training manual for supporting implementation of National Health Accounts (NHA) in India. The manual was commissioned by the Ministry of Health and Family Welfare, Government of India with support from World Health Organization, India office, as part of the ongoing efforts to institutionalize NHA in the country.

The IHS is a public health research and training institution which aims to groom skills, gather evidence and generate knowledge, for people's health. The Institute strives to build local capacity and the global knowledge base for public health and socioeconomic development. National Health Accounts is a key area of the Institute's work. The analysis of government expenditure on health during the 1980s in Andhra Pradesh by IHS happens to be one of the first contributions towards building up of state health accounts in India. The evidence base provided by the study was a key driver for the subsequent World Bank AP First Referral Health Systems Project and reallocation of resources to the secondary care sector. Expertise gained at the IHS in electronic compilation of government budget data contributed to preparation of the first budget data on disk in India. A more comprehensive State Health Accounts which traced flow of funds from multiple sources to uses was developed for Andhra Pradesh for the year 2001-02.

In recent years, the Institute has been providing support to the NHA cell of the Ministry of Health and Family Welfare, which was set up to institutionalize NHA in the country as per requirements of National Health Policy of India, 2002. In addition to preparation of this manual, the Institute has been supporting the ministry in refining the NHA methodology and estimation procedures as well as carrying out studies to address data gaps in the Indian NHA. The Institute has adapted the NHA methodology for preparation of medium term health expenditure frameworks and tracking of resource flows for various state governments.

The manual was written and compiled by Dr. C. K. George at the IHS. It is envisaged that the manual would assist NHA teams in India by imparting comprehensive theoretical knowledge as well as practical classroom experience and would facilitate institutionalization of NHA in the country.

Dr. Prasanta Mahapatra
Honorary President
Institute of Health Systems

Acknowledgments

Production of this Manual was sponsored by the Ministry of Health and Family Welfare (MoHFW), Government of India and financed by the World Health Organization (India) office. Ms. Ganga Murthy, Economic Advisor (MoHFW) has been providing leadership for institutionalizing NHA in India. Her efforts in building capacity for NHA in the country has ensured homegrown expertise, patent in the production of this manual. Her invaluable support and guidance in preparing the manual is gratefully acknowledged. The seeds for development of NHA in the country as well as this manual was sown and nurtured by Mr. Sunil Nandraj, Cluster Head, Health Systems Development, World Health Organization, India Office. Mr. Nandraj has played a critical role in bringing together technical resources from diverse areas and building institutional capacity for NHA in India in a relatively short span of time. We are indebted to him for his inputs, encouragement, patience and generous amount of time he spent with us in development of the manual.

We especially thank Ms. Anagha Khot of the WHO (India) office for her inputs and for providing background documents, taking care of administrative arrangements and keeping the manual preparation on track.

The Institute of Health Systems had hosted two expert group meetings to review and guide the manual preparation. The manual reflects the collective wisdom and experience of these experts. We gratefully acknowledge the contribution of Dileep TR (CDS, Trivandrum), KV. Narayana (CESS, Hyderabad), Shaktivel (PHFI, Delhi), Selvaraju (Abt Associates, Delhi), VB Annigiri (CMDR, Dharwad) and Somil Nagpal (IRDA, Hyderabad).

The manual is extensively based on the WHO Guide to producing national health accounts (2003) and its adaptation by India. Definitions for various classes and sub-classes adopted in the aforesaid guide has been sourced from the OECD System of Health Accounts (SHA). The manual has greatly benefited from and liberally adapted material from the National Health Accounts Trainer Manual (2004) produced by the PHRplus and SHA Guidelines: Practical guidance for implementing A System of Health Accounts in the EU (2004) produced by the Office for National Statistics (UK). In addition, the manual has referenced a wide range of literature which has been acknowledged in respective chapters.

C. K. George
Director
Institute of Health Systems

Chapter One

Introduction to the National Health Accounts Training Manual

Need for a NHA Training Manual

Health systems in developing countries are undergoing a radical transformation in a rapidly changing milieu of expectations, opportunities, risks and adverse consequences spawned by demographic changes, globalization, economic reforms and increasing demands on health care systems and financial resources. In such an environment, policy makers in the health sector have the responsibility of devising ways to use available resources more efficiently and to seek means of raising additional resources. With the increasing scope and complexity of health systems, policy makers are recognizing the need to use tools such as the National Health Accounts (NHA) to manage their health care resources. The NHA provides a framework and approach for measuring total health expenditures, thereby providing critical information to health care decision makers.

In India, the National Health Policy (NHP 2002), emphasized the need for improved and comprehensive information through national health accounts and accounting systems. The NHP 2002 sought to establish national health accounts, conforming to the `source-to-users' matrix structure, by 2005. The policy also envisages the estimation of health costs on a continuing basis. In accordance with the NHP-2002, the Ministry of Health and Family Welfare has brought out the NHA for the year 2001-02 and is committed to developing NHA for the subsequent years. Several State Governments have evinced need and interest to develop State Health Accounts in their respective States. In the Indian context, state health accounts are more important, because many of the major policy decisions concerning resource allocation to health and social sectors are made at the state level. Given its mandate to institutionalize National Health Accounts in the country, the MoHFW with support from the World Health Organization has facilitated development of this training manual for NHA in order to ensure uniformity in NHA methodology and its replicability. It is envisaged that the

manual would assist NHA teams and academic researchers by imparting comprehensive theoretical knowledge as well as practical classroom experience regarding National Health Accounts.

The manual is intended to accompany the Guide to producing National Health Accounts with special application for low-income and middle-income countries (World Health Organization, World Bank and USAID, 2003) on which the Indian NHA is based. The manual draws from the experience of conducting training workshops for national and state level stakeholders within the country and international experience derived from the manuals and guidelines developed by the PHRplus and the Office of National Statistics (UK). The scope, curricula, session plan, teaching methods and study materials for each unit were reviewed and finalized by an Expert Group.

Using the Training Manual

Objectives of the Training Manual

- To provide potential NHA team members and/or researchers with theoretical and practical information required to effectively participate in a team developing NHA at national and/or state levels.
- To empower senior level decision makers at state and national levels with sufficient knowledge about NHA to use findings prepared by NHA teams in health policy making.

Target Audience

Faculty

Persons who have already undergone formal training in NHA methodology and has had experience of conducting NHA analysis could be considered as faculty. Ideally a training programme should have a mix of faculty drawn from academia and the services.

Participants

Participants will include:

- Potential NHA team members at the State or national level and researchers who can provide technical support to the NHA teams.
- Senior decision makers who would benefit from understanding NHA even though they would not perform any analysis

Approach to Training

The manual has been developed keeping in mind NHA requirements of India. General concepts and methodology of NHA introduced in the initial chapters is sought to be reinforced in subsequent chapters through an in-depth coverage of key NHA entities in the Indian context. The manual is designed to impart knowledge and skills required for developing NHA at national and state levels.

The manual guides faculty on how each chapter should be introduced to the participants. Technical material is sought to be introduced through readings and presentations. Each chapter contains appropriate reading material and references to the "Guide to producing National Health Accounts with special application for low-income and middle-income countries" and other resources which are provided in the CD-ROM accompanying this manual. Faculty may use these resources as supplemental reading and training material.

Each chapter also contains exercises, discussion questions and case studies drawn from the experience of developing NHA in India to simulate methodological challenges likely to be encountered in the NHA process and provide opportunity to generate group discussion and reflection on methodological and State specific issues. The manual seeks to facilitate an interactive approach to learning, whereby concepts introduced in presentations and readings are reinforced and participants gain concrete experience in solving methodological challenges in the NHA process.

Teaching the Manual

A suggested agenda for the training programme is provided in the latter part of this chapter. The chapters are ordered in such a manner that there are ample opportunities to repeatedly reinforce NHA concepts using India specific examples. The chapters do not follow the exact chronology of the NHA process. This is because it is anticipated that the baseline knowledge of the participants regarding NHA is minimal and hence it would be more useful to introduce the initial processes of NHA such as setting up the NHA team and developing a work plan, once they gain a better understanding of basic NHA concepts.

Participants should be provided a copy of the manual along with the accompanying CD-ROM containing NHA resources and the agenda for the training programme. They should be encouraged to review the prescribed reading material for each session prior to class room lectures and discussions. It is recommended that faculty begin each session with an interactive lecture aided by power-point slides. Faculty are encouraged to relate lectures to their experiences with the NHA methodology and processes and accordingly modify the slides. Subsequent to the lectures participants could carry out exercises, followed by a review of exercise answers and group discussion.

Additional Materials Required for the Training Programme

- **Agenda:** Experience from past workshops indicate that five days is an optimal time frame for teaching the material in the manual. Exact time frame will depend on participants prior knowledge of the NHA methodology, their professional background and size of the trainee group. A sample agenda for a five day training workshop is included in this chapter.
- **Participant Information Form:** The form will be used to collect background information and contact details of the participant. This information will be a useful input for faculty in structuring their sessions. Further, it will be useful in identifying potential faculty for subsequent training programmes and focal points for developing State Health Accounts.
- **Post Test for Training Workshop:** It is assumed that most participants will not have had much exposure to NHA. Hence a pre-test is not suggested. However, it will be useful to have a post test conducted to gauge the extent to which participants have grasped the concepts and methodology of NHA.
- **Faculty and Course Evaluation Forms:** Feedback from the participants regarding individual faculty performance and overall course experience will be useful in improving subsequent training programmes

NHA Training Workshop: Sample Agenda

Day One

0900-1030	Registration and Introductory Session
1030-1100	TEA BREAK
1100-1230	Basic Concepts of National Health Accounts
1230-1330	LUNCH
1330-1500	Defining and Categorizing Health Expenditure
1500-1530	TEA BREAK
1530-1730	Classification of Health Care Functions

Day Two

0900-1030	Classification of Financing Sources and Financing Agents
1030-1100	TEA BREAK
1100-1230	Classification of Providers
1230-1330	LUNCH
1330-1530	Key Steps in Implementing NHA
1530-1600	TEA BREAK
1600-1730	State and Central Government Health Expenditure

Day Three

0900-1030	Health Expenditure of Local Bodies
1030-1100	TEA BREAK
1100-1230	Health Expenditure by NGOs
1230-1330	LUNCH
1330-1500	Health Insurance and Employer Funds for Health Care
1500-1530	TEA BREAK
1530-1730	Household Health Expenditure

Day Four

0900-1100	Identifying NHA Entities, Data Sources and Principal Policy Issues to be addressed by NHA in different States: Participant Presentations *Participants from each State will be grouped together and will be asked to make a joint presentation on the aforesaid topics. Time 10-15 minutes for each team presentation followed by a discussion of 5-10 minutes.*
1100-1130	TEA BREAK
1130-1300	Populating NHA matrices and resolving data conflicts
1300-1400	LUNCH
1400-1530	Case Study- FS x HF Matrix
1530-1600	TEA BREAK
1600-1730	Case Study- FS x HF Matrix

Day Five

0900-1100	Case Study- HF x HP Matrix
1100-1130	TEA BREAK
1130-1300	Case Study- HF x HC Matrix
1300-1400	LUNCH
1400-1500	Post Test
1500-1530	Evaluation of Training

NHA Training Workshop: Participant Information Form

Workshop Date:_____

Name:	
Educational Qualifications:	
Designation:	
Organization:	
Office Address:	
Office Telephone:	
Mobile Phone:	
E-mail:	
What is your area of work expertise (public financial management, health financing, medicine, epidemiology etc)? Specify	
Briefly explain what you know about NHA?	
How do you think you will benefit from the training programme?	

Post Test for NHA Training Workshop

Please answer the following questions. Answer briefly, preferably in outline or bullet form.

Question One

What do you think are the uses of National Health Accounts?

Question Two

What do you understand by the terms-Financing Source, Financing Agent, Provider and Function in the context of NHA? Give examples of each.

Question Three

Which of the following expenditures incurred by Gram Panchayats in a State will you include in NHA and under which functions? Give Reasons

1. Construction and maintenance of drains and the disposal of drainage water and sullage
2. Cleaning of streets and removal of rubbish and prickly pear and other relevant items to improve sanitary conditions in the village.
3. Provision of latrines and arrangements
4. Mosquito control measures for prevention of malaria
5. Conducting pulse polio programmes
6. Establishment and maintenance of dispensaries
7. Implementing noon day meal programme for school children
8. Surveillance of drinking water quality
9. Enforcement of the Prevention of Food Adulteration Act, 1964

Question Four

The Department of Health and Family Welfare of State is implementing a health insurance scheme for all families living below poverty line for the treatment of major ailments requiring hospitalization and surgery. The scheme is managed by a "Health Trust" that has been set up by the government. The State government pays an yearly premium to the Trust to provide coverage of Rs. 1 lakh per beneficiary. Additional expenses have to be borne by the beneficiaries. The Department of Health and Family Welfare fixes payment rates for different types of procedures and issues guidelines on which provider could be enrolled in the

scheme. In 2006-07 the government paid a premium of Rs. 100 crore to the insurance company. The insurance company reimbursed Rs. 50 crore and Rs. 20 crore to private and public hospitals which provided hospitalized care to the beneficiaries. In addition, the company incurred an expenditure of Rs. 20 crore on administration of the scheme. Beneficiaries whose treatment cost exceeded the coverage limit, spent Rs. 15 crore from their own pockets in availing the benefits from private hospitals.

1. Under what type of insurance would you include the aforesaid scheme? Give reasons.
2. Identify the sources of funds, financing agents, providers and functions of the scheme and depict the flow of funds in tables given below; from:
    1. Sources to Financing Agents

Financing Agents	Sources of Funds		Total
Total (Rs. Crore)			

    2. Financing Agents to Providers

Providers	Financing Agents		Total
Total (Rs. Crore)			

    3. Financing Agents to Functions

Functions	Financing Agents		Total
Total (Rs. Crore)			

Faculty Evaluation Form

1. Please rate faculty for each session on the following dimensions as P- Poor, S- Satisfactory, G- Good, VG- Very Good or O- Outstanding

Session	Dimension	P	S	G	VG	O
Basic Concepts of National Health Accounts	Overall effectiveness in class					
	Sensitivity/responsiveness to student in class					
	Degree of preparations for class					
	Ability to present material in class					
	Ability to lead class discussion					
	Ability to stimulate student thinking					
Defining and Categorizing Health Expenditure	Overall effectiveness in class					
	Sensitivity/responsiveness to student in class					
	Degree of preparations for class					
	Ability to present material in class					
	Ability to lead class discussion					
	Ability to stimulate student thinking					
Classifying Entities in the Health Care System	Overall effectiveness in class					
	Sensitivity/responsiveness to student in class					
	Degree of preparations for class					
	Ability to present material in class					
	Ability to lead class discussion					
	Ability to stimulate student thinking					
Classification of Health Care Functions	Overall effectiveness in class					
	Sensitivity/responsiveness to student in class					
	Degree of preparations for class					
	Ability to present material in class					
	Ability to lead class discussion					
	Ability to stimulate student thinking					
Classification of Providers	Overall effectiveness in class					
	Sensitivity/responsiveness to student in class					
	Degree of preparations for class					
	Ability to present material in class					
	Ability to lead class discussion					
	Ability to stimulate student thinking					

Session	Dimension	P	S	G	VG	O
Key Steps in Implementing NHA: Sketching the Health System	Overall effectiveness in class					
	Sensitivity/responsiveness to student in class					
	Degree of preparations for class					
	Ability to present material in class					
	Ability to lead class discussion					
	Ability to stimulate student thinking					
Investigating Data Sources	Overall effectiveness in class					
	Sensitivity/responsiveness to student in class					
	Degree of preparations for class					
	Ability to present material in class					
	Ability to lead class discussion					
	Ability to stimulate student thinking					
Government Health Expenditure	Overall effectiveness in class					
	Sensitivity/responsiveness to student in class					
	Degree of preparations for class					
	Ability to present material in class					
	Ability to lead class discussion					
	Ability to stimulate student thinking					
Health Expenditure by NGOs	Overall effectiveness in class					
	Sensitivity/responsiveness to student in class					
	Degree of preparations for class					
	Ability to present material in class					
	Ability to lead class discussion					
	Ability to stimulate student thinking					
Health Insurance and Employer Funds for Health Care	Overall effectiveness in class					
	Sensitivity/responsiveness to student in class					
	Degree of preparations for class					
	Ability to present material in class					
	Ability to lead class discussion					
	Ability to stimulate student thinking					
Household Health Expenditure	Overall effectiveness in class					
	Sensitivity/responsiveness to student in class					
	Degree of preparations for class					
	Ability to present material in class					
	Ability to lead class discussion					
	Ability to stimulate student thinking					

Session	Dimension	P	S	G	VG	O
Populating NHA matrices and resolving data conflicts	Overall effectiveness in class					
	Sensitivity/responsiveness to student in class					
	Degree of preparations for class					
	Ability to present material in class					
	Ability to lead class discussion					
	Ability to stimulate student thinking					
Case Study	Overall effectiveness in class					
	Sensitivity/responsiveness to student in class					
	Degree of preparations for class					
	Ability to present material in class					
	Ability to lead class discussion					
	Ability to stimulate student thinking					

2. Which sessions and exercises did you find most useful? Why?

3. Which sessions need improvement? Please give your suggestions for improvement.

Course Evaluation Form

Overall Training Experience

Thinking about the course, how would you rate...	Poor	Good	Superior
1.Course overall			
2.Usefulness of course to you for your job			
3.Quality of lectures			
4.The quality of in-class discussions			
5.Overall educational value			
6.Helpfulness of feedback on course work			
7.The clarity with which goals were stated			
8.The degree to which goals were achieved			

Course Design

1.Sequencing of topics	Confusing	Somewhat logical	Logical & connected
2.Handouts and readings	Irrelevant	Relevant	Most appropriate
3.Usefulness of problems	Somewhat useful	Useful	Very useful
4.Adequacy of time allocation	Too little	Just Right	Too much

Chapter Two

Basic Concepts of National Health Accounts

Learning Objectives

- To understand the context and reasons for development of NHA methodology
- To understand the role of NHA as an input to stewardship for improving health performance
- To understand the basic framework of NHA, what it attempts to measure, and its limitations
- To recognize the similarities and differences between NHA and SHA

Unit Outline

- Setting the Context for National Health Accounts
- The National Health Accounts Concept
- Purposes of NHA
- Limitations of NHA
- Basic Framework of National Health Accounts
- Development of NHA Methodology

Time Requirements

- In Session
  - Presentation: 60 minutes
  - Exercises: 30 minutes

Note To Faculty

This chapter introduces the basic concepts of NHA to participants. It may be noted that for many participants this may be the first exposure to NHA. Begin the session by establishing the need for reliable health system financing information. The faculty may begin by asking participants why such information is helpful to policymakers in their efforts to maximize the effectiveness of their health sectors. The faculty should continue to set the context for NHA by demonstrating the need for standardized tools to capture health financing information. Introducing the concept of NHA explain that NHA is essentially a standard set of tables that organizes, tabulates, and presents health expenditure information in a simple format. Another NHA feature that the faculty should be sure to communicate is that NHA tables track the flow of health funds through the health sector. Emphasize that NHA tables are tools designed to be used to improve the capacity of planners to manage the health sector. The faculty should point out that, while NHA contributes to the policy process, it is not the only tool to do so. Rather, when making policies, decision makers must consider NHA data in conjunction with non-financial data, such as disease prevalence rates and provider utilization data. Provide participants an overview of the development of NHA methodology and how it compares with SHA.

Setting the Context for National Health Accounts

Need for Health System Financing Information

Demographic transition, changing patterns in burden of disease, technological advances and rising expectations of people have led to increasing demands on health care systems and financial resources. Governments are increasingly called upon to address growing inequity in health status and health services within countries. In many instances the demand for health services exceeds the capacity of the government to finance them, so a high proportion of total health expenditure is paid out-of-pocket by households. This puts households at risk of catastrophic spending and possible impoverishment. In such an environment, policy makers in the health sector have the responsibility of devising ways to use available resources more efficiently and to seek means of raising additional resources.

However, mobilization and efficient allocation of resources demand financial data that allow the accurate estimation of financing needs and allocations. Many developing countries lack these data. Traditionally, policy makers have relied on health financing data pertaining to central or state government's contribution to the health sector, often ignoring other key sources. Health systems are becoming increasingly complex with a wide variety of stakeholders performing different roles. Local governments, NGOs, external agencies and insurance agencies are emerging players in the health sector. Government's ability to achieve equity, provide public goods type of services and handling of market failures is linked to the quantum and composition of health sector expenditure. In thinking about new strategies to address health policy goals, it is therefore crucial to know where the funds for health care are coming from and how they are being utilized. Information about the sources and uses of funds for health is thus a key input in deciding how public funds are best used.

Need for Standardized Tools to Capture Health Financing Information

Having established the need for financing information the faculty should continue to set the context for NHA by demonstrating the need for standardized tools to capture health financing information. Call attention to Tables 2.1 and 2.2 to highlight differing estimates of country health expenditure brought out by different agencies.

Estimates differ due to lack of standardization in what, when, and how data were collected. In many instances, public spending is underestimated as data is captured only from traditional health institutions such as the ministries of health and not necessarily other relevant entities such as the ministries of women and child welfare, labour, social welfare etc. Without standardization countries cannot compare their health expenditure pattern with any other country and judge the reasonableness of their health expenditures.

Table 2.1: Comparison of Health Expenditure Information between World Health Report and the India NHA for the year 2001-02

Health Expenditure Indicators	World Health Report	India NHA
Total Health Expenditure (THE) as % of GDP	6.1	4.6
Government Expenditure on health as % THE	17.9	20.3
Private expenditure on health as % of THE	82.1	77.4
External resources for health as % of THE	0.4	2.3
Out-of-pocket expenditure as % of private expenditure on health	100	93

Source: World Health Report 2004 (WHO) and NHA: India 2001-02 (Go1)

Table 2.2: Comparison of available estimates of health expenditure in India (2001-02)

Source of funds	NHA Cell	NCMH	CSO
(a) Public Funds			
Central Government	67,185	78,600	
State Government	132,709	156,520	
Local Government	14,497	23,990	
Total (a)	214,391	259,110	170,740
(b) All other funds			
Firms (Public Enterprises and Private Firms)	56,365	55,460	NA
Households	760,939	747,600	765,260
Foreign Agencies	24,847	2,210	NA
NGOs	800	3,660	NA
Total (b)	842,951	808,930	7,65,260
Total Health Expenditure (Rs. Million)	1,057,342	1,068,040	9,36,000

Note: NCMH- National Macroeconomic Commission of India; CSO- Central Statistical Organization
Source: National Health Acounts: India 2001-02 (GoI)

Concept of NHA

NHA is an internationally accepted methodology used to determine a nation's total health expenditure patterns, including public, private, and donor spending.

The faculty should reiterate that NHA collects expenditure information, for the reasons identified above. It is also important to explain that NHA is essentially a standard set of tables that organizes, tabulates, and presents health expenditure information in a simple format. It has been designed to be straightforward and easily understood by policymakers, including those without a background in economics or accounting.

In addition to determining how much each of the financing sources spends on health, another NHA feature is that NHA tables carefully tracks the flow of funds from one health care actor to another, such as the distribution of funds from the Ministry of Health to each government health provider and health service. In short, NHA trace the flow of resources invested and consumed in the production of health and answers questions such as:

- How are resources mobilized and managed for the health system?
- Who pays and how much is paid for health care?
- What goods and services are provided and by whom?
- How are health care funds distributed across the different services, interventions and activities that the health system produces?
- Who benefits from health care expenditure?

The NHA Framework

At its broadest level, NHA measures health spending as a percentage of the GDP. This gives an idea of how much of the country's resources is spent on health. NHA results produce other indicators relevant to policy makers such as:

- Government health expenditures as a percent of total public expenditure-to assess priority given to health care by the government viz-a viz its other activities
- Government health expenditures as percent of total health spending – to ascertain government's role in providing health care to its population
- Household expenditures as a percent of total health spending – to estimate the burden of out-of-pocket expenditures borne by households
- External aid as a percent of total health spending –to evaluate how much the government will have to allocate in the future after the donor aid ceases.

The NHA framework organizes and tabulates health spending data in the form of matrices or two dimensional tables. Each matrix captures an analytical dimension of total health spending. International experience in the development and use of health accounts suggests a number of useful dimensions for consideration. Some dimensions are particularly suited to assist in the estimation of total spending. Others are particularly suited to evaluating or formulating health policy. Taken as

a group, these dimensions address almost every possible request made of the health accounts regarding system performance. These dimensions are:

❍ Financing Sources

Sources refer to the entities from which financial resources are generated for health. Health spending by sources answer the question “where does the money come from for health care?’ Examples in the Indian context include: governments (state, central and local), quasi government organizations, public and private sector enterprises, government organized societies and autonomous institutions, NGOs, households, donor agencies etc

❍ Financing Agents

Financing Agents are institutions or entities that channel funds provided by financing sources and use the funds to pay for, or purchase, the activities inside the health accounts boundary. Examples are state and central ministries for health, local governments, households, NGOs, social and private insurance, private and public enterprises etc. This category sheds light on the question "who manages and organizes funds for health care?" For example, the Aarogyasri scheme of the Andhra Pradesh is positioned as an health insurance scheme managed by a trust. But in reality, it is financed by the government. Here the financing source is the government and financing agent is the Aarogyasri Trust.

❍ Providers

They are the end users or final recipients of health care funds. They are the entities which deliver health services. They include hospitals, private doctors, traditional care providers, trained birth attendants, providers of collective health services etc. This category provides information on the question "To whom does the money go?"

❍ Functions

Functions refer to the services or activities that providers deliver with their funds. Information at this level answers the question" what type of service product or activity was actually produced? Examples include curative care, preventive care, family welfare services, health care administration, medical education, research etc.

❍ Resource Costs

Resource Costs are the factors or inputs used by providers or financing agents to produce the goods and services consumed or the activities conducted in the system. They include salaries and wages; drugs, materials and supplies; service costs; interest payments, capital expenditure etc.

❍ Beneficiaries

Beneficiaries are the people who receive those health goods and services or benefit from those activities. Beneficiaries can be categorized in many different

ways based on their age and sex, their socioeconomic status, their health status, and their location.

Each of the NHA tables displays some facet of health expenditure cross-tabulated by two of the dimensions listed above. One of these dimensions can be thought of as the "origin" of the funds and the other dimension as the "use" of the funds. By convention, the origin dimension is shown as columns in the table and the use dimension is shown as rows. In a departure from the mathematical convention that matrices are named by their row and column, NHA tables are named by column and row; this convention is rooted in long-standing health accounts tradition and reflects the flow of resources from the origin to the use. Depending on policy requirements, availability of data and funds for collection of data; a set of nine NHA tables that illustrates the financial flows of funds between the various dimensions could be developed.

- Health expenditure by financing agent and provider (HF X HP);
- Health expenditure by provider and function (HP X HC);
- Health expenditure by financing agent and function (HF X HC);
- Health expenditure by financing source and financing agent (FS x HF);
- Health expenditure by cost of resources;
- Health expenditure by age and sex of the population;
- Health expenditure by socioeconomic status of the population;
- Health expenditure by health status of the population;
- Health expenditure by geographic region.

Experience in countries where health accounts have been created indicates that four of the dimensions listed are critical for accurate estimation of total health spending. These are the dimensions of sources, financing agents, providers, and functions. Therefore, while drawing attention to possibility of developing a set of nine NHA tables, the faculty should focus on the core set of three NHA tables adopted by Government of India that show the flow of funds from:

Financing Sources	→	Financing Agents
Financing Agents	→	Providers
Financing Agents	→	Functions

Purpose of NHA

NHA is a tool specifically designed to inform the health policy process, including policy design and implementation, policy dialogue, and the monitoring and evaluation of health care interventions. Its primary users are health system policy

makers and managers, who use NHA data in their efforts to improve health system performance and management.

NHA is a particularly useful as a policy tool because:

- NHA offers an international standardization of health expenditure information. This allows policymakers an assessment of the current use of resources and compare health expenditures of their country with those of other countries, especially countries of similar socioeconomic backgrounds. This is of particular value when setting performance objectives and benchmarks.
- If implemented on a regular basis, NHA can track health expenditure trends, which is useful for health care monitoring and evaluation purposes.
- NHA methodology can also be used to make financial projections of a country's health system requirements. By providing comprehensive information on total health expenditure as well as flows of financing NHA contributes to *sustainability* of health expenditure
- NHA can contribute to measuring efficiency of health expenditure. Efficiency is concerned with the use of available resources and includes productive efficiency and allocative efficiency. Productive efficiency is when health systems deliver the highest possible output from given inputs and so produce at lowest unit cost whereas allocative efficiency occurs when health systems produce those goods and services most required by society. By tracking flow of funds within the health system, NHA contributes to the understanding of how resources have been used and how their use might be improved.
- NHA data combined with non-financial data such as demographic information, disease prevalence rates and provider utilization rates, equips policy makers to make sound policy decisions and avoid potentially adverse policy choices. Two key areas where NHA can contribute is with regards to effectiveness and equity of health expenditure
    - Effectiveness is defined as the extent to which an intervention or a set of interventions achieve goals. Effectiveness is a technical concept which relates health services directly to their outcome. The detailed set of expenditure classifications proposed in the NHA can be linked to health outcome measures and inferences can be made on how different institutional arrangements in a country could lead to better outcomes.
    - By identifying the shares of private and public expenditure on health care in a health system, NHA can contribute to consideration of equity. Comprehensive information on sources of financing along with demographic data can provide a picture of the extent to which aspects of the health system are equitable.

Limitations of NHA

Faculty should emphasize that although NHA have been proved to be a useful way to organize and present financial information about the health system, they are not the answer to all health policy questions. Health accounts focus on the financial dimension of the health system, and NHA data cover health expenditure. The health accounts themselves do not distinguish between effective and ineffective expenditures. To answer many policy questions, NHA information must be combined with non-financial data from sources such as epidemiological studies, population surveys, and the like

Development of the NHA Methodology

Now that the class has been introduced to NHA's concept, purpose, and tables it would be easier to present the historical development of NHA. The NHA framework adopts its basic principles of health accounting from the System of Health Accounts (SHA) of the Organization for Economic Cooperation and Development (OECD). The SHA provides the International Classification for Health Accounts (ICHA), which classifies health care entities and categorizes each type of health expenditure.

The SHA manual represents a milestone in the establishment of an international standard for NHA, but its primary audience is that of high-income countries, excluding some considerations specific to developing countries. For instance: OECD methodology for NHA does not make an explicit differentiation between financing sources and financing agents. This is because for most OECD countries this differentiation would be of little interest. Governments are the source of the largest part of health care financing through general and earmarked taxation and mandatory contributions in most OECD countries. Also, the sources of financing are stable and change little over time. These conditions do not apply to developing countries like India as governments provide less than one fourth of the total health expenditure from taxation. In addition, the composition of sources of financing may change significantly over period of time. Another example is the exclusion of role of external resources such as donor funds in financing care in the SHA. While external resources have little importance in developed countries they play an important role in many developing countries.

In an effort to encourage other countries to produce NHA, the United States Agency for International Development (USAID), the World Bank (WB), and the World Health Organization (WHO) jointly sponsored the development of a complementary manual, *"A guide to producing National Health Accounts: with special applications for low and middle income countries*" (commonly referred to as the Producers Guide). The methodology adopted in the Producers Guide expands the SHA classification scheme to enable collection of health expenditure data in the more disaggregated fashion demanded by a pluralistic health system of financing and delivery, where providers may receive payment from more than one source and where payments may be made to numerous types

of providers. Countries like India follow the basic methodology adopted by the Producers Guide with minor modifications based on local requirements and form in which data is available.

References

1. Guide to producing national health accounts, with special applications for low-income and middle-income countries, World Health Organization, 2003. Chapter-1
2. National Health Accounts Training Manual, PHR Plus, 2003. Unit 1
3. A System of Health Accounts, Version 1. OECD, 2000
4. SHA Guidelines: Practical guidance for implementing A System of Health Accounts in the EU (2004) produced by the Office for National Statistics (UK) - Chapter 1 and 2
5. Understanding National Health Accounts: The Methodology and Implementation Process, Primer for Policy Makers, PHR Plus, 2003

Chapter Two Exercises

Question One

Based on the table given below, list the countries in ascending order i.e., from the lowest to highest, vis a viz

1. Government's role in providing health care to its population
2. Burden of out-of-pocket expenditures borne by households
3. Reliance on Donor Aid

Health Expenditure Indicators	India	China	UK	USA	South Africa
Government Expenditure on health as % Total Health Expenditure (THE)	17.9	37.2	82.2	44.4	41.4
Private expenditure on health as % of THE	82.1	62.8	17.8	55.6	58.6
External resources for health as % of THE	0.4	0.2	0	0	0.4
Out-of-pocket expenditure as % of private expenditure on health	100	95.4	55.3	26.5	22.1

Question Two

The Ministry of Finance, Government of India allocates Rs. 10,000 crore to the Ministry of Health and Family Welfare which in turn allocates Rs.1000 crore to one of its wings the National AIDS Control Organization (NACO). Rs. 50 crore is provided to the Tamil Nadu State AIDS Control Organization (TNSACS) by NACO. TNSACS also receives Rs. 10 crore grant from a bilateral agency. TNSACS provides grant of Rs. 10 crore to NGOs for conducting HIV prevention programmes, Rs.10 crore to government hospitals and Rs. 5 crore to private hospitals for providing treatment to HIV patients. From the above, list all the financing sources, financing agents, providers and functions.

Question Three

Four members of a household were covered by a health insurance policy paid for by the employer of the head of the household. One of the members fell ill and had to be hospitalized in a private hospital. The insurance company paid 80% of the hospital bill and the balance was paid directly to the hospital by the family. Identify the financing sources, financing agents, providers and functions?

Question Four

According to National Health Accounts of India, public expenditure accounts for 12.9% of the total health expenditure in Kerala compared to 30.4% in Rajasthan. Based on the NHA results can you make any inference regarding effectiveness of public expenditure on health in these States? Why?

Chapter Three

Defining and Categorizing Health Expenditure

Learning Objectives

- To understand what constitutes health expenditure
- Be familiar with functional definition of health expenditure and space and time boundaries of health expenditure
- To familiarize participants with key issues in measuring health expenditure and provide a context for thinking about detailed categories of spending

Module Outline

- Defining "Health" and "Health Related" Expenditure
- Space Boundaries of National Health Accounts
- Time Boundaries of National Health Accounts
- Criteria for Inclusion as Health Expenditure
- Issues to be Considered when Measuring Health Expenditure

Time Requirements

- In Session
  - Presentation: 45 minutes
  - Exercises: 45 minutes

Note To Faculty

The previous chapter has set the broad context of NHA and its uses. It is now time to discuss what types of activities to include in the health accounts framework and what types to exclude. It is often said, not without reason, that "everything under the sun, including the sun affects human health". Therefore dividing activities between "health" and "not health" can be difficult. Without a clear idea as to what constitutes health activities, the task of determining which transactions that take place in the economy are counted when measuring health expenditure, and which are excluded becomes onerous. Without setting clear cut boundaries that help us to determine what constitutes health activities and thereby health expenditure, the NHA exercise is likely to be rendered unaffordable, unmanageable and untimely. Moreover, without consistent rules in making these decisions, health expenditure estimates cannot be compared across geographical regions or within a region across time. This chapter's discussions are intended to enable participants to judge what needs to be included under NHA and what needs to be excluded. While setting the functional boundaries for health expenditure, the faculty should make use of various examples of what falls within and outside the NHA framework. Discussions should facilitate expression of participants views regarding suitability of including/excluding an activity under NHA and provide clarifications based on boundaries that have been set.

Defining "Health" and "Health Related" Expenditure

We now know that National Health Accounts deals with health expenditure. This chapter helps to define what constitutes health expenditure. Here we need to emphasize why defining health expenditure is important. We need to clearly define health expenditure to:

- **Facilitate Comparability Across Time:** Without a clear definition there is likely to be variations in what is included as health expenditure across time. For instance: if expenditure on capital formation is included in one year but not in the following year, then total expenditure may appear to have decreased whereas the discrepancy was actually due to what was included in health expenditure. Lack of clear documented definitions makes it difficult to maintain consistency in NHA data and jeopardizes the credibility and reliability of the NHA exercise.
- **Facilitate Comparability Across Space:** NHA serves as a tool which facilitates comparisons across countries and between geographic and administrative regions within a country. This enables countries and states to develop benchmarks to assess their own performance and draw lessons from the experiences of their neighbours that are socioeconomically similar. Without clear uniform definitions such comparisons cannot be made. For instance: a medical college provide both curative services and medical education. Since it may be difficult to separate expenditure on medical colleges into these two, in the absence of a clear definition one State may include expenditure on medical colleges under medical education and the other under curative services. This will result in overestimation of total cost of one service and underestimation of the other, which is misleading for the respective state health policies and for comparison with each other. For this reason, it must be ensured that countries and states use definitions that are clear and compatible with universal standard definitions.

Let us now consider what activities and thereby what expenditures can be included within the NHA boundary. The System of Health Accounts (SHA) of the Organization for Economic Cooperation and Development (OECD) has adopted a functional approach to defining the boundary of health care. The SHA approach is functional in that it refers to the goals and purposes of activities (e.g. cure, rehabilitation, prevention etc.) and is independent of where and how the activities are provided and how they are financed. The SHA defines internationally comparable health care functions and provides a general concept of health care that forms the basis for activities to be considered health care. The definition of health care in the SHA is founded on the premise that the provision of health activities requires some kind of medical knowledge or training. In most cases, this will mean direct contact with a medically qualified professional; either a doctor or a nurse. In some cases, the contact may be indirect, as in the case of

health care provided by community health workers who are supervised by a qualified nurse. In other cases, the contact will be with a person who is not medically qualified, but has received medical training to carry out the very specific activity in question. This is the case with paramedics and others closely associated with the provision of medical services. For medical goods bought over the counter, the medical input is to be found at the pharmaceutical design stage, and also in the provision of the prior education on the pharmaceutical' health benefits to the purchaser before the medical goods are bought.

Box 3.1: The SHA concept of "health care" underlying the functional classification

Activities of health care in a country comprises the sum of activities performed either by institutions or individuals pursuing, through the application of medical, paramedical and nursing knowledge and technology, the goals of:

- promoting health and preventing disease;
- curing illness and reducing premature mortality;
- caring for persons affected by chronic illness who require nursing care;
- caring for persons with health-related impairment, disability, and handicaps who require nursing care;
- providing and administering public health;
- providing and administering health programmes, health insurance and other funding arrangements

Noting that the health expenditures are restricted to activities based on "medical" technology in the SHA, the Producers Guide recognized that many countries may legitimately wish to expand the boundary described in the SHA manual. Therefore it considers goods and services purchased from informal and possibly illegal health care providers, even those not medically qualified, as appropriate for inclusion in the accounts. Similarly, purchases from traditional providers, who may not use Western or allopathic medical technology, may also be included.

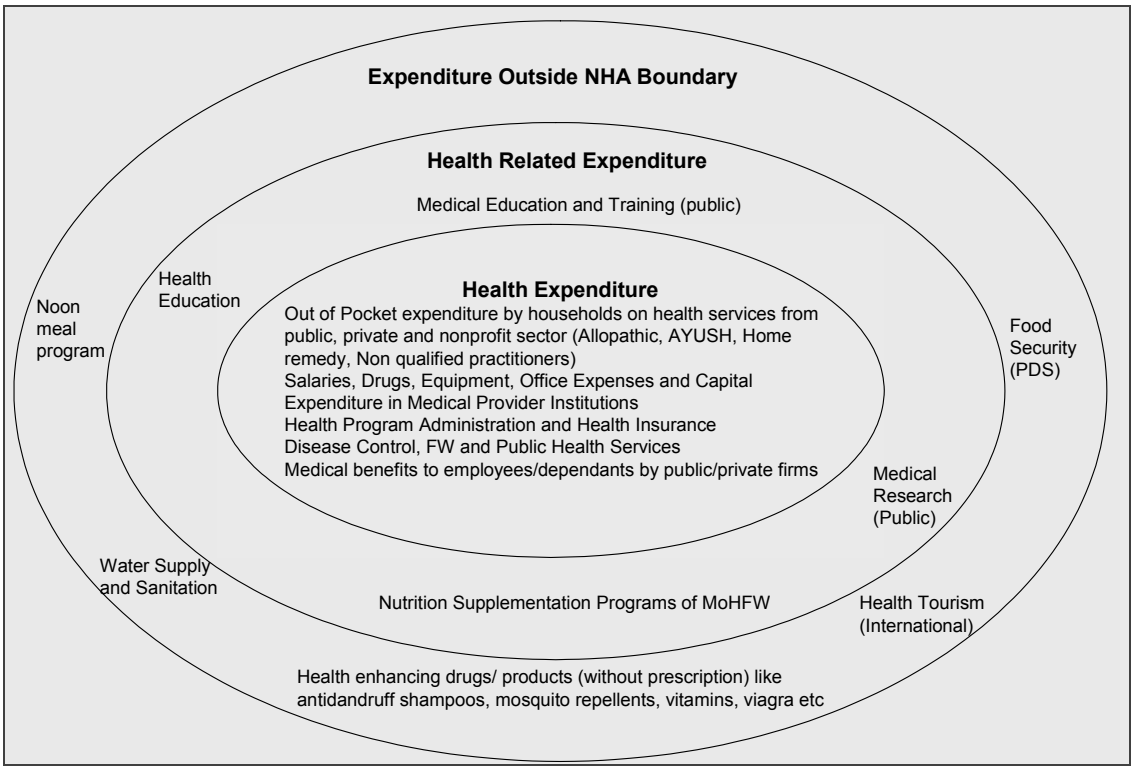
According to the WHO a health system includes "all the activities whose primary purpose is to promote, restore or maintain health" (World Health Report, 2000). Drawing from the aforesaid definition, the Producers Guide defines national health expenditure as encompassing all expenditures for activities whose primary purpose is to restore, improve and maintain health for the nation and for individuals during a defined period of time. (When developing State Health Accounts "nation" refers to the "State" as a geographic and political entity). This definition applies regardless of the type of the institution or entity providing or paying for the health activity. The "primary purpose**" is inferred from the type**

of good or service purchased, or determined from the stated intention of the purchaser. Two important characteristics of activities included within the sphere defined above are:

- **The Use of Resources:** If there is no use of resources, there is no transaction, and the activity is not measured in the health accounts. In other words some one has to pay for the services to be included in health accounts. For example, the goods and services consumed by one family member to care for another family member are appropriately included with health spending, but the unpaid labour of that caregiver, in a treatment parallel to that used to measure the aggregate output of the economy, is not counted among health expenditures.
- **Emphasis is on what was spent:** The definition emphasizes on the retrospective which means that actual expenditure is included but budget allocations which are prospective are excluded.

Keeping in mind the above definition of health expenditure, the NHA teams are required to determine whether or not the primary purpose of an activity is for health. Functional boundaries developed for the Indian NHA exercise is given in Figure 3.1.

Figure 3.1: Functional Boundaries for NHA in India



Source: National Health Accounts: India 2001-02, Ministry of Health and Family Welfare, Government of India

Certain expenditures traditionally not included in health estimates may be included in NHA. For instance spending on health services by departments of tribal welfare, women and child welfare, labour etc., are included in NHA. In other instances all expenditures incurred by an entity may not be included under NHA. For example: municipal expenditure on public health may include spending on water and sanitation systems. Installation of basic public water and sanitation systems affects health, but construction of systems with the primary intent to distribute water falls outside the health boundary. In contrast, water treatment primarily designed to counteract disease can be considered inside the boundary. Similarly nutritional and other welfare programmes which could have a bearing on health status, but are primarily anti poverty measures, are excluded from NHA. However, when the primary purpose of a nutritional programme is health improvement, for example a supplementary nutrition programme that provides feeding as therapy to assist recovery from acute malnutrition, it should be included.

Certain activities which may not be considered as health care activities per se are included within the NHA boundary based on the 'primary purpose criteria'. These are termed as 'health related activities and include: capital formation by health care providers, education and the training of health personnel, research and development, food hygiene and drinking water control, and environmental health. Expenditures on these activities are denoted as 'health related expenditure'.

Table 3.1: Activities that may be Included in or Excluded from Health Expenditure

Activity	Included as Health Related	Unlikely to be Health Related
Water Supply and Hygiene Activities	Surveillance of drinking-water quality; construction of water protection whose primary purpose is to eliminate water borne disease	Construction and maintenance of large urban water supply systems whose primary purpose is access to water for the urban population
Nutrition Support Activities	ICDS, Nutritional counselling and supplementary feeding programme to reduce children's malnutrition	Midday meal programmes whose primary purposes is income support or security
Education and Training	Medical education and in-service training for paramedical workers	Secondary school education received by future physicians or health workers
Research	Medical research; health services research	Basic scientific research in biology and chemistry

Source: Producers Guide (2003)

Time and Space Boundaries

In the earlier section we have arrived at a functional definition of health care expenditure. In addition to a boundary stated in terms of the types of activities considered, NHA possess boundaries in terms of space and time. Certain expenditures may meet functional definition of health expenditure but exceed space and time boundaries, making the expenditure less relevant to the NHA exercise.

Space Boundary

The accounts capture health expenditure for a country or a state, but this measure is not limited to the activity that takes place within their borders. Rather, it is defined in terms of their citizens and residents. This means that the accounts include spending on health care by citizens and residents who are temporarily abroad. Conversely, the accounts exclude spending in the country by foreign nationals. However, some States which promotes themselves as centers for 'health tourism', may have a policy interest in knowing about health expenditure by foreign nationals. They may choose to include the same as a distinct category. It may be noted that health tourism is currently excluded from the Indian National Health Accounts.

Spending of external agencies (such as bilateral, multilateral and other international agencies) on health and health related goods and services on residents of the recipient country or a state is included in health accounts. However, administrative and overhead expenses incurred by these agencies in provision of health and health related goods and services are excluded

Time Boundary

The time boundary of the health accounts has two elements. First, a particular period must be chosen within which the activities took place. Most often this is a fiscal year or a calendar year. The Indian Health Accounts has specified the fiscal year (1st April- 31st March) as the time boundary as government entities report spending on the basis of a fiscal year. However, some private entities may report on the basis of a calendar year. In such a case, the health accountant must adjust the figures reported to fiscal year basis. Examples of how this can be done are provided in Annex D of the Producers Guide.

The other element of the time boundary is the distinction between when the activity took place and when the transaction that paid for the activity took place. This involves a choice between accrual accounting and cash accounting. Health accounts should use the accrual method, in which expenditures are attributed to the time period during which the economic value was created, rather than the cash method, in which expenditures are registered when the actual cash disbursements took place. For example, if a hospital stay occurs during the last month of the old fiscal year, but is paid for during the second month of the new

fiscal year, it should be recorded as an expenditure in the old fiscal year. However, in practice a mix of accrual and cash accounting is used based on the form in which data is available in the country. Public sector expenditure in India is counted on the basis of cash accounting whereas private sector expenditure estimates are generally prepared on accrual basis.

Criteria for Inclusion as Health Expenditure

We have looked at 3 criteria for including an expenditure as health expenditure- primary purpose, space and time boundaries. As a statistical system, the NHA process must meet other criteria that help make NHA easier and more useful to understand.

- **The 2 Percent Threshold:** Expenditures on certain health care activities may not be significant and hence may not have much policy relevance. Generally if expenditure on a health activity is less than 2 percent of the total health expenditure, it is not included under NHA. It may not be worth expending time and resources to precisely measure expenditures that constitute less than 2% of the total health expenditure. For example, unlike developed countries, expenditure on 'community care for elderly' is negligible in India and hence is not included in the Indian NHA.
- **Relevance for Policy:** Since the primary purpose of NHA is to inform policy, exception of the two percent rule is made if the health expenditure has policy relevance. For example: As per the NHA 2001-02, local bodies finance about 1.3% of the total health expenditure in India. Even though their contribution is less than 2% they continue to be included under the Indian NHA as current policy in India favors decentralization of health care to local bodies and envisages their greater role in delivery of services. Information on health spending of local bodies is crucial in evaluation of policy decisions taken and has a bearing on future actions of the government to meet policy goals. Similarly, health policy of India envisages a greater role for NGOs and hence they are included in the Indian NHA even though less than 1% of the total health expenditure currently flows through them.
- **Transparency:** As it will be evident in subsequent chapters, health expenditure data may have to be pooled from different sources. A number of assumptions and estimation procedures may be required to transform data into NHA expenditure figures. Therefore it is important to document sources of data, classifications and definitions, methodological assumptions and estimation procedures used for preparing NHA. Such documentation would help users make informed choice regarding utility of NHA estimates. Health expenditures which do not have a documented evidence base is excluded in NHA. For

example, unsubstantiated reports of bribes paid in health sector is not included in NHA.

- **Respect and Reflect International Standards and Conventions:** Health expenditure measures should be compatible with international standard classifications and conventions to facilitate comparability across and within time and space. Departures from these standards may be required to accommodate country or state specific requirements. Such departures need to be clearly documented.
- **Feasible to Implement:** Many a time the NHA exercise is limited by the nature and availability of data. Due to constraints of time and resources, NHA teams may not be able to include some expenditures or collect the highest quality data on certain expenditures. The NHA team may often be required to weigh the time/resource and quality tradeoffs when planning NHA exercises. To minimize time and financial cost of the NHA exercise, the NHA team may chose to exclude certain expenditures for which reliable data is not available or which would consume significant resources and time to collect. In some countries data on different expenditure categories may be grouped together and it may be difficult to desegregate expenditure figures into appropriate categories. In such cases NHA teams may choose to include the unsegregated expenditure figures under the major category and exclude the relatively minor categories. For instance: expenditure on nursing care facilities and residential mental health facilities are considered as two distinct expenditure categories in developed countries. However, in India desegregate data on these two categories is not available as they are subsumed under the category of hospitals. Therefore the India NHA has chosen to exclude these two categories. In other instances some data may be available but may require adjustments of uncertain validity. NHA teams may accept such rough estimates and clearly document it as such. If better data becomes available at a later date, the NHA for the given year can be revised, or a better estimate can be used in a later NHA round. For example: data on household health expenditure in India is obtained from periodic household surveys conducted by the National Sample Survey Organization. These surveys are conducted once in 8-10 years, are costly to conduct and takes at least 2 years from the start of survey for the results to be out. The Indian NHA exercise prepared estimates for the year 2001-02 by applying appropriate growth rates to data of the NSSO survey undertaken in 1995-96. Subsequently the NHA for 2003-04 is being prepared with data from the NSSO survey undertaken in the same year.

Issues to be Considered in Measuring Health Expenditure

In national accounting, expenditure refers to the economic value of goods and services produced or consumed. Health goods and services may be produced within the market or outside. Health accountants need to be careful in establishing the economic value of the health activity in these two distinct settings.

Estimating the Value of Market Provider Activity

For market production, this value is established by the transaction prices observed in the market. In deciding how much was spent on a particular product or service purchased from providers that operate in essentially an unsubsidized fashion, consideration of total revenues is a good starting point for estimating the health spending attributed to them. The figure for expenditure measures the value in monetary terms of consumption of the goods and services of interest. Where expenditure on health goods and services is being measured from market production and consumption, this may simply mean compiling information on the total amount of money paid for such goods or activities at the point of final consumption. For example, if unsubsidized private hospitals have gross revenues of 1000 crore rupees from the sale of services during the year of interest, this Rs. 1000 crore is added to health expenditure. Because market producers must cover all their intermediate expenses, including capital goods used and the labour inputs of owners, the expenditure on final consumption reasonably represents an all-in value. It may be noted that providers may, however, engage in activities that fall outside the health boundary as well as those that lie inside the boundary. For example, revenue of a hospital may include that from running of canteens, parking fees, sale of toiletries etc. Where possible, excluded activities should be separated from the ones to be included. This may be done through use of economic statistics such as surveys, through an input/output model based on national accounts, or through consultation with knowledgeable industry sources.

Estimating the Value of Non-Market Provider Activity

A great deal of health activity occurs partly or wholly outside the market. Such activities may include:

- **Free or Subsidized Services:** Governments, private employers, or non-profit institutions such as health care providers affiliated to religious bodies often produce health care services and provide them at no cost or at a subsidized cost to users. The transaction between providers and patients in these cases is unlikely to represent the full value of production, so health accounting follows the international convention of valuing non-market production as the sum of the costs incurred in the production of these goods or services. Hospital services provided free of charge (or nearly free of charge) in government institutions or

institutions of non-profit organizations would be valued at the cost to those organizations producing the services. Costs are typically calculated as the actual expenditure on inputs such as staff remuneration (including all benefits) and supplies.

- **In-Kind Assistance:** Countries or states may receive in-kind donor assistance such as vaccines, medicines or equipment. In such cases the market prices of the same or similar item should be used to estimate value of the goods. In some cases under centrally sponsored programs, there is in-kind transfer of goods from Ministry of Health and Family Welfare (Government of India) to the State Departments of Health. Though the cost of these goods are reflected in the central budget, they are not included in the state government budgets. While preparing State Health Accounts, costs of such transfers also have to be included.
- **Household Production of Health Care:** Unpaid family care is not considered to be part of national health expenditure. Households and families provide a lot of inputs to health care, through their uncompensated time and effort. For example, family members take time to care for the sick at home or to stay with them in hospital. These inputs may be very significant, as in the case of home-based care for people living with HIV/AIDS or elderly. However, trying to capture these expenses will be time consuming. In addition these services are difficult to monetize. Thus uncompensated care expenses are not usually included in total health expenditures captured by the NHA framework.

Valuing Capital Created and Consumed

In health accounting, capital usually refers to the physical assets (land, buildings, vehicles and equipment) owned by or available to the entity in question, having an useful life of more than one year. Two distinct aspects of capital must be considered in measurement of health expenditure: gross fixed capital formation and the consumption of fixed capital. Gross fixed capital formation includes value of items such as new building construction or major renovations, or purchases of large equipment in a specified period. Consumption of fixed capital refers to the value of the capital assets used up for production during the current period. Thus there are two ways to capture capital expenditure. The first way is to include the full cost of the capital good in the year that it was paid for. For example if the government purchases an X-Ray machine for one lakh rupees in the fiscal year 2006-07, the full amount will be included in the 2006-07 NHA. The second way is to “depreciate” the capital good by calculating the value of using up the capital good each year. Using the simplest depreciation method as an example, if the X-Ray machine referred to above has a useful life of 5 years, the depreciation expense will be Rs. 20000 each year. National Income Accountants have more accepted methods for estimating capital consumption, and health accountants could follow the same practices. However, many governments do not calculate an estimate of capital consumption, or do not budget for that, as money does not change hands in this activity. The Indian

National Health Accounts includes the actual expenditure on capital goods incurred in a particular year. Capital expenditures in the private sector need not be separately estimated because cost of these items is reflected in the prices they charge to their patients.

References

1. Guide to producing national health accounts, with special applications for low-income and middle-income countries, World Health Organization, 2003.
2. National Health Accounts Training Manual, PHR Plus, 2003.
3. A System of Health Accounts, Version 1. OECD, 2000
4. SHA Guidelines: Practical guidance for implementing A System of Health Accounts in the EU (2004) produced by the Office for National Statistics (UK)
5. Understanding National Health Accounts: The Methodology and Implementation Process, Primer for Policy Makers, PHR Plus, 2003

Chapter Three Exercises

This chapter has discussion questions which are intended to facilitate a discussion on NHA boundaries and issues to be considered while including an activity in NHA, in the Indian context. Rather than focussing on whether participants answers match those suggested, the faculty should pay close attention to participants responses and justifications. Ultimately NHA teams will need to document similar types of justifications when they determine health care expenditure boundaries.

Question One

Assume that you are developing NHA for India for the fiscal year 2005-06. All health and health related functions are included in the NHA. The fiscal year relates to the period between 1st April 2005 and 31st March 2006. Which of the following activities will you include in NHA? Justify your answers.

1. Health care provided by the Department of Home Affairs to inmates of jails.
2. Capacity building of RNTCP programme officers in computer skills
3. Noon meal scheme for primary school children
4. Regular monitoring of piped water supply for contamination by fecal bacteria.
5. Bednets purchased from a department store for protection against mosquito bites.
6. Insecticide treated bednets provided under the malaria control program
7. Physiotherapy recommended by the doctor for rehabilitation of a 60 year old man hospitalized with a stroke.
8. 'Overseas Mediclaim' (a health insurance) policy taken by a person who is a resident of Maharashtra while going for a short visit to Germany.
9. Treatment availed from a private hospital in India for gastroenteritis by a group of tourists from Spain
10. Treatment availed by a citizen of Maldives who is attending a 4 year residential academic programme in India .
11. Hospitalized treatment in a private hospital in February 2005.
12. Surgery underwent by a employee of a private firm in a corporate hospital in March 2006, bill of which was settled by the insurance company in May 2006.

Question Two

In the aftermath of a severe flood a charitable organization sponsored by a private firm in India spends Rs. 9 crore in relief operations in 2005-06. Rs. 3 crores was spent on constructing dwellings, Rs. 2 crore on food aid, Rs. 1 crore on constructing sanitation facilities, Rs. 1 crore on constructing a hospital, Rs. 1 crore for operating expenses of the hospital, Rs. 50 lakhs on outreach work for malaria control and Rs. 50 lakhs on water quality surveillance to prevent gastroenteritis. Estimate total expenditure on health and health related functions incurred by the organization? Give reasons for including/excluding the above expenditures in the NHA.

Question Three

In the year 2005-06, a hospital providing tertiary care services was provided a grant in aid of Rs. 2 crores by the State Government towards the cost of providing free treatment to poor patients. The State Government also provided 2 dialysis machines worth Rs. 1 crore to the hospital to cater to the increased patient load. In addition, the government reimbursed the hospital for providing health care services to government employees. The hospital provided health services costing Rs. 5 crore to government employees in 2005-06, of which Rs. 3 crore was reimbursed in the same year. In 2005-06 the government also reimbursed Rs. 1 crore which was due to the hospital for health care services provided to state government employees in 2004-05. Estimate total health expenditure for the year 2005-06 and give reasons for including/excluding any of the above expenditures in the NHA for 2005-06?

Chapter Four

Classification of Health Care Functions

Learning Objectives

- Be familiar with the International Classification for Health Accounts (ICHA) and its coding system as adapted in India
- Identify and classify health and health related functions
- Understand flexibility in NHA approach to classification which allows nationally relevant categories within broader ICHA categories
- Acquire an overview of Health Care Functions in the Indian context

Module Outline

- International Classification of Health Accounts (ICHA)
- Classification of Health Care Functions
- Classification of Health Related Functions
- Key Issues in Classification of Health Care Functions
- Establishing Aggregate Measures of National Health Expenditure

Time Requirements

- In Session
  - Presentation: 60 minutes
  - Exercises: 60 minutes

Note To Faculty

This unit returns to material that was introduced in Chapter 2 and 3. The faculty should begin each section of the unit by asking participants to briefly describe what they remember about individual topics – the System of Health Accounts and major NHA classifications – before leading the participants through this chapter's more detailed presentation and exercises on each topic.

Draw attention to the ICHA classification developed by the SHA and its subsequent modification by the Producers Guide. Emphasize that the Indian NHA closely follows the classification adopted by the Producers Guide with minor modifications. Use the examples of these modifications to demonstrate flexibility in the NHA approach to classification. This chapter focuses on classification of health care functions and its role in establishing aggregate measures of national health expenditure. Details of sub-classifications of ICHA functional categories as provided in the SHA are given in this chapter. In the Indian context it is quite difficult to differentiate between many of them. They have been included to give an idea of the range of services that are subsumed under each major category. Exercises should focus on making the trainees familiar with the coding methodology used in classification. Facilitate discussion on various categories using examples from the Indian and State specific contexts.

In a health system as complex as that of India with multiple actors and transactions it is necessary to make use of classification schemes that allow health accountants to summarize health expenditure in a meaningful way. Classification schemes which group transactions that share common characteristics in one or more of the NHA dimensions form the core of the NHA methodology.

Countries have been using classification schemes that have evolved in response to their policy and administrative requirements. For instance; India uses a classification scheme prescribed by the Comptroller and Auditor General (CAG) of India for government budget and accounts. It goes without saying that other countries have their own classification schemes which makes inter- country comparisons difficult. The NHA approach calls for a standardized classification precisely for this reason. Adoption of international classification schemes for health accounts may appear to be a daunting task given the wide ranging differences in national health systems. However, the fundamental building blocks of health systems are fairly similar across nations. National health systems tend to perform many similar tasks and functions, often with institutional entities that have similar characteristics. Consequently, the classification schemes used can be quite similar across national systems. Ready-made classification schemes for the major NHA dimensions are available which are flexible enough to accommodate country specific characteristics of the health system. Adoption of international schemes is particularly useful as they have already have undergone considerable review and validation, and using them can save the time and cost of developing a schedule from scratch. Further, these classification schemes have evolved from national accounting and other statistical reporting environments and significant economies of scale are to be found in using classifications in common with those used by national income accountants.

International Classification of Health Accounts (ICHA)

The Indian NHA follows the International Classification of Health Accounts (ICHA) classification adopted by the Producers Guide with minor modifications based on local requirements and the form in which data is available. The International Classification for Health Accounts (ICHA) developed for the System of Health Accounts (SHA) by the Organisation for Economic Cooperation and Development (OECD) is a tri-axial classification system which makes a clear distinction between the financial, institutional and functional aspects of health systems. It was designed to be compatible with a number of existing classification schemes and practices in international economic statistics, most importantly, with the system of national accounts (SNA). The system of national accounts is a broad structure for national economic accounting, developed jointly by the Commission of the European Communities, the International Monetary Fund, the Organisation for Economic Cooperation and Development, the United Nations, and the World Bank. The SHA was adapted by the Producers Guide to collect health expenditure data in the more

desegregated fashion demanded by a pluralistic health system of financing and delivery.

The heart of the NHA approach is the grouping of health actors into categories with common characteristics. The principal ICHA categories are:

- Financing Sources , denoted by the code FS
- Financing Agents, denoted by the code HF
- Health Providers, denoted by the code HP
- Health Care Functions, denoted by the code HC

These principal categories are subdivided and coded numerically. They also be further disaggregated into sub-categories/ sub-classifications relevant for policy. A health entity is represented in the NHA using three identifiers.

- First is the letter code for the principal ICHA category, e.g. “FS” if it represents a source of fund;
- Second is a numerical code, e.g. “FS.1” which denotes its sub-category as a financing source- in this case public funds;
- And finally, the ICHA name for this sub-category, e.g. “FS.1 Public Funds”

Classification of Health Care Functions

The functional classification is the key classification among the four since it is the one that ultimately determines total health expenditure- the most important figure obtained with the Health Accounts. The international comparability of the functions justifies their choice as the basis for computing the financial commitment to health care in a country.

The International Classification for Health Accounts functional classification of health care categorizes the types of goods and services produced by health care providers and by institutions and actors engaged in related activities to health care. The ICHA provides classification for both Health Care (HC) and Health Care Related (HCR) functions. The ICHA-HC classifies functions into seven major categories (HC.1 to HC.7). Functions HC.1 to HC.5 are functions of personal health care and comprise services provided to individuals. Personal health care services comprise services of curative care, of rehabilitative care, services of a (long-term) nursing type care, ancillary services to health care and medical goods dispensed to out-patients which include self-medication and other goods consumed by households with or without a prescription from medical or paramedical professionals. Functions HC.6 and HC.7 comprise of collective health services. The term “collective” in NHA is related to the concept of a health programme and includes collective actions that can be attributed to individuals. Function HC.6 -Prevention and Public Health Services comprise a range of publicly provided services such as epidemiological surveillance and other

measures of health promotion and disease prevention and related general public health activities. HC.7 -Administration and Insurance relates to spending on operation of the system' financing agents. The ICHA-HC classification is given in Table 4.1.

Table 4.1: International Classification for Health Accounts scheme for health care functions (ICHA-HC)

ICHA Code	Description of Functions
HC.1	**Services of curative care**
HC.1.1	Inpatient curative care
HC.1.2	Day cases of curative care
HC.1.3	Outpatient curative care
HC.1.3.1	Basic medical and diagnostic services
HC.1.3.2	Outpatient dental care
HC.1.3.3	All other specialized medical services
HC.1.3.4	All other outpatient curative care
HC.1.4	Services of curative home care
HC.2	**Services of rehabilitative care**
HC.2.1	Inpatient rehabilitative care
HC.2.2	Day cases of rehabilitative care
HC.2.3	Outpatient rehabilitative care
HC.2.4	Services of rehabilitative home care
HC.3	**Services of long-term nursing care**
HC.3.1	Inpatient long-term nursing care
HC.3.2	Day cases of long-term nursing care
HC.3.3	Long-term nursing care: home care
HC.4	**Ancillary services to medical care**
HC.4.1	Clinical laboratory
HC.4.2	Diagnostic imaging
HC.4.3	Patient transport and emergency rescue
HC.4.9	All other miscellaneous ancillary services

ICHA Code	Description of Functions
HC.5	**Medical goods dispensed to outpatients**
HC.5.1	Pharmaceuticals and other medical nondurables
HC.5.1.1	Prescribed medicines
HC.5.1.2	Over-the-counter medicines
HC.5.1.3	Other medical nondurables
HC.5.2	Therapeutic appliances and other medical durables
HC.5.2.1	Glasses and other vision products
HC.5.2.2	Orthopaedic appliances and other prosthetics
HC.5.2.3	Hearing aids
HC.5.2.4	Medico-technical devices, including wheelchairs
HC.5.2.9	All other miscellaneous medical goods
HC.6	**Prevention and public health services**
HC.6.1	Maternal and child health; family planning and counselling
HC.6.2	School health services
HC.6.3	Prevention of communicable diseases
HC.6.4	Prevention of non-communicable diseases
HC.6.5	Occupational health care
HC.6.9	All other miscellaneous public health services
HC.7	**Health administration and health insurance**
HC.7.1	General government administration of health
HC.7.1.1	General government administration of health (except social security)
HC.7.1.2	Administration, operation and support of social security funds
HC.7.2	Health administration and health insurance: private
HC.7.2.1	Health administration and health insurance: social insurance
HC.7.2.2	Health administration and health insurance: other private
HC.nsk	*HC expenditure not specified by kind*
HC.R	**Health-related functions**
HC.R.1	Capital formation for health care provider institutions
HC.R.2	Education and training of health personnel
HC.R.3	Research and development in health
HC.R.4	Food, hygiene and drinking-water control
HC.R.5	Environmental health
HC.R.nsk	*HC.R expenditure not specified by kind*

Given issues related to availability of data, the Indian NHA has restricted itself to selected functional categories. However, it has adopted the ICHA functional classification, keeping the option for future utilization of unused categories when data for the same becomes available. In subsequent sections, we will explore in more detail the description of major functional categories, especially as it applies to the Indian context.

Personal Health Services: Modes of Production

The basic criterion for classifying health care services is the type of episode of care provided (curative, rehabilitative and long-term nursing care). These personal health care functions are further subcategorized by mode of production (in-patient, day care, outpatient and home care). Where the care is provided at a patient' home, this is clearly home care. The sub-categorization by other modes of production is based on answer to three basic questions:

- Is the care provided on the premises of the provider?
- Is the patient formally admitted for care on the premises of the provider?
- Does the patient stay on the premises of the provider overnight?

Table 4.2: Concepts underlying modes of production classification of functions of personal health care

Stay at Hospital	Formal Admission	No Formal Admission
Overnight Stay	In-patient	N/A
No Overnight Stay	Day care	Out-patient

The following definitions of mode of production are used throughout the ICHA-HC classification for defining categories of personal health care services at the two digit level.

Inpatient Care

An in-patient is a patient who is formally admitted (or "hospitalised") to an institution for treatment and/or care and stays for a minimum of one night in the hospital or institution providing in-patient care. In-patient care is mainly delivered in hospitals, but partially also in nursing and residential care facilities. In-patient care includes accommodation provided in combination with medical treatment when the latter is the predominant activity provided during the stay as an in-patient. Attendant charges and expenditure on lodging and boarding of relatives associated with the overnight stay of the patient is an integral part of cost of inpatient care

Day Care

Day care comprises medical and paramedical services delivered to patients that are formally admitted for diagnosis, treatment or other types of health care with the intention of discharging the patient on the same day. An episode of care for a patient who is admitted as a day-care patient and subsequently stays overnight is classified as an overnight stay or as an in-patient case. Services for non-admitted patients that are extended to formal admission for day-care are considered as day care. A day patient (or "same-day patient") is usually admitted and then discharged after staying between 3 and 8 hours on the same day. Examples of Day care include admissions to facilities for minor elective surgeries, diagnostic procedures such as biopsies and procedures for treatment such as dialysis which does not require an overnight stay at the facility.

Outpatient Care

An outpatient is not formally admitted to the facility and does not stay overnight. An outpatient is thus a person who goes to a health care facility for a consultation/treatment, and who leaves the facility within hours of the start of the consultation without being "admitted" to the facility as a patient. Facilities include: outpatient departments of hospitals, primary health care centres, subsidiary health centres, dispensaries, physician's private office, or ambulatory-care centres.

Home Care

Home Care comprises medical and paramedical services delivered to patients at home. It excludes the consumption of medical goods (pharmaceuticals, other medical goods) dispensed to out-patients as part of private household consumption. Included are obstetric services, dialysis, services provided by ANMs and health visitors; and long-term nursing care.

HC.1 Services of Curative Care

An episode of curative care is defined as one in which the principal medical intent is to relieve symptoms of illness or injury, to relieve the severity of an illness or injury or to protect against exacerbation and/or complication of an illness and/or injury which could threaten life or normal function. An episode of illness may involve one or several episodes of care. Services of curative care includes: obstetric services; cure of illness or provision of definitive treatment of injury; the performance of surgery; diagnostic or therapeutic procedures.

HC.1.1 In-patient curative care

In-patient curative care comprises medical and paramedical services delivered to in-patients during an episode of curative care.

HC.1.2 Day cases of curative care

Services of curative day care comprise medical and paramedical services delivered to day-care patients during an episode of curative care such as same day surgery, dialysis, and oncological care.

HC.1.3 Out-patient curative care

Services of out-patient curative care comprise medical and paramedical services delivered to outpatients during an episode of curative care. Outpatient health care comprises mainly services delivered to out-patients by physicians in establishments of the ambulatory health care industry or hospital industry. It also includes services delivered by traditional healers and the like.

HC.1.3.1 Basic Medical and Diagnostic Services:

This item comprises services of medical diagnosis and therapy that are common components of most medical encounters and that are provided by physicians to out-patients. These include routine examinations, medical assessments, prescription of pharmaceuticals, routine counselling of patients, dietary regime, injections and vaccination (only if not covered under public-health prevention programmes). They can be part of initial medical attention and consultation or of follow-up contacts. Routine administrative procedures like filling in and updating patients' records are usually an integral part of basic medical services.

HC.1.3.2 Out-patient Dental Care

This item comprises dental medical services (including dental prosthesis) provided to out-patients by physicians. It includes the whole range of services performed usually by medical specialists of dental care in an out-patient setting such as tooth extraction, fitting of dental prosthesis and dental implants.

HC.1.3.3 All Other Specialised Health Care

This item comprises all specialised medical services provided to out-patients by physicians other than basic medical and diagnostic services and dental care. Included are mental health and substance abuse therapy and out-patient surgery.

HC.1.3.9 All Other Out-patient Curative Care

This item comprises all other miscellaneous medical and paramedical services provided to out-patients by physicians, paramedical practitioners as well as those without formal medical qualifications. Includes services provided to outpatients by paramedical professionals such as chiropractors, occupational therapists,

by paramedical professionals such as chiropractors, occupational therapists, speech therapists and audiologists. Included are paramedical mental health and substance abuse therapy, speech therapy, diagnostic physical therapy, physical therapy exercise and other therapeutical procedures, such as hydrotherapy and heat therapy; orthotic and prosthetic care; attention to wounds; osteopathic treatment; training and medical rehabilitation for the blind.This item also includes services provided by traditional healers and other alternative practitioners.

HC.1.4 Services of Curative Home Care

This item comprises all medical and paramedical curative services provided to patients at home. This includes home visits to provide curative care, including diagnostic procedures by general practitioners; specialised services such as home dialysis and obstetric services.

HC.2 Services of Rehabilitative Care

An episode of rehabilitative care involves services where the emphasis lies on improving the functional levels of the persons served and where the functional limitations are either due to a recent event of illness or injury or of a recurrent nature (regression or progression). Included are services delivered to persons where the onset of disease or impairment to be treated occurred further in the past or has not been subject to prior rehabilitation services. The rehabilitative care is generally more intensive than traditional nursing facility care and less than acute (curative) care. It requires frequent (daily to weekly) recurrent patient assessment and review of the clinical course and treatment plan for a limited (several days to several months) time period, until a condition is stabilised or a predetermined treatment course is completed. Depending on mode of service, HC.2 is further classified as inpatient, outpatient, day cases or rehabilitative home care.

HC.3 Services of Long-term Nursing Care

Long-term health care comprises ongoing health and nursing care given to in-patients who need assistance on a continuing basis due to chronic impairments and a reduced degree of independence and activities of daily living. In-patient long-term care is provided in institutions or community facilities. Long-term care is typically a mix of medical (including nursing care) and social services. Only the former is recorded in the NHA under health expenditure. Long-term nursing care for dependent elderly patients includes respite care and care provided in homes for the aged by specially trained persons, where medical nursing care is an important component. Hospice or palliative care (medical, paramedical and nursing care services to the terminally ill, including the counselling for their families) are also included in this category of care. Hospice care is usually provided in nursing homes or similar specialised institutions. Also included is

in-patient long-term nursing care for mental health and substance abuse patients where the care need is due to chronic or recurrent psychiatric conditions.

HC.4 Ancillary Services to Health Care

This item comprises a variety of services, mainly performed by paramedical or medical technical personnel with or without the direct supervision of a medical doctor, such as laboratory, diagnosis imaging and patient transport.

HC.4.1. Clinical Laboratory

This item includes: urine, physical and chemical tests, blood chemistry, automated blood chemistry profiles, haematology, immunology, fecal tests, microbiologic cultures, microscopic examination, specialised cytology, tissue pathology and all other miscellaneous laboratory tests provided to outpatients.

HC.4.2. Diagnostic Imaging

This item comprises diagnostic imaging services provided to out-patients such as Plain X-ray, bone; Soft tissue imaging; Contrast X-rays or photoimaging; Computerised tomography and nuclear magnetic imaging; Nuclear scanning and Diagnostic ultrasound. All other miscellaneous diagnostic imaging such as arteriography using contrast material, angiocardiography, phlebography, thermography, bone mineral density studies are also included

HC. 4.3 Patient Transport and Emergency Rescue

This item comprises transportation in a specially- equipped surface vehicle or in a designated air ambulance to and from facilities for the purposes of receiving medical and surgical care. It also includes transportation in conventional vehicles, such as taxi, when the latter is authorised and the costs are reimbursed to the patient.

HC.5 Medical Goods Dispensed to Out-patients

This group covers medicaments, prostheses, medical appliances and equipment and other health related products provided to individuals, either with or without a prescription, usually from dispensing chemists, pharmacists or medical equipment suppliers and intended for consumption or use by a single individual or household outside a health facility or institution.

HC.5.1 Pharmaceuticals and other Medical Non-durables

This item comprises pharmaceuticals such as medicinal preparations, branded and generic medicines, drugs, patent medicines, serums and vaccines, vitamins and minerals and oral contraceptives.

HC.5.1.1 Prescribed Medicines

Prescribed medicines are medicines, exclusively sold to customers with a medical prescription and include branded and generic products.

HC.5.1.2 Over-the-Counter Medicines

Over-the-counter medicines (OTC medicines) are classified as private households' pharmaceutical expenditure of non-prescription medicines.

HC.5.1.3 Other Medical Non-durables

This item comprises a wide range of medical nondurables such as bandages, elastic stockings, incontinence articles, condoms and other mechanical contraceptive devices.

HC.5.2 Therapeutic appliances and other medical durables

This item comprises a wide range of medical durable goods such as glasses, orthopaedic appliances hearing aids and other medical devices.

HC.5.2.1 Glasses and Other Vision Products

This item comprises corrective eye-glasses and contact lenses as well as the corresponding cleansing fluid and the fitting by opticians.

HC.5.2.2 Orthopaedic Appliances & Other Prosthetics

This item comprises orthopaedic appliances and other prosthetics: orthopaedic shoes, artificial limbs and other prosthetic devices, orthopaedic braces and supports, surgical belts, trusses and supports, neck braces. Orthopaedic implants done in hospital settings are not included here but in HC.1, Curative care.

HC.5.2.3 Hearing Aids

This item comprises all kinds of removable hearing aids (including cleaning, adjustment and batteries). Audiological diagnosis and treatment by physicians; implants; audiological training are excluded from this category and are classified under HC.1, Curative care.

HC.5.2.4 Medico-technical Devices

This item comprises a variety of medico-technical devices such as wheelchairs (powered and unpowered) and invalid carriages.

HC.5.2.9 All Other Miscellaneous Medical Durables

This item comprises a wide variety of miscellaneous durable medical products not elsewhere classified such as blood pressure instruments.

HC.6 Prevention and Public Health Services

Prevention and public health services comprise services designed to enhance the health status of the population as distinct from the curative services, which repair health dysfunction. It may be noted that this category includes preventive care services that are offered as part of public health programs. Personal preventive care such as vaccinations for travel or screening for a disease requested on the patient's own initiative are embedded in curative care

HC.6.1 Maternal and Child Health; Family Planning and Counselling

Maternal and child health covers a wide range of health care services generally provided under the umbrella of reproductive and child health services. This includes antenatal care; delivery services; postnatal care; emergency obstetric and neo-natal care; benefits provided to pregnant women for availing health care such as transport, vouchers; child health services; and family planning services.

HC.6.2 School Health Services

This item comprises a variety of services of health education, screening, disease prevention, promotion of healthy living conditions and lifestyles provided in school. This includes basic medical treatment if provided as an integral part of a public health programme for school health.

HC.6.3 Prevention of Communicable Diseases

This item comprises compulsory reporting and notification of certain communicable diseases and epidemiological enquiries into communicable disease; efforts to trace possible contacts and origin of disease; immunisation/ vaccination programmes (compulsory and voluntary); vaccination under maternity and child health care. This also includes services under programmes for prevention and control of diseases such as tuberculosis, HIV, leprosy, gastroenteritis, malaria and other vector borne diseases. Vaccination for occupational health (HC.6.5); vaccination for travel and tourism on the patients' own initiative (HC.1.3.1) are excluded from this category.

HC.6.4 Prevention of Non-communicable Diseases

This item comprises public health services of health education, disease prevention, and the promotion of healthy living conditions and lifestyles. Includes: interventions against smoking, alcohol and substance abuse such as

anti-smoking campaigns; programs for prevention and control of goitre, cancer, blindness, diabetes etc. Screening of blood pressure, diabetes, and certain forms of cancer, dental health, and "health check-ups" when part of public health programs are included under this category. When availed on the patient's own initiative, these services are included under curative care.

HC.6.5 Occupational Health Care

Occupational health care comprises a wide variety of health services such as surveillance of employee health (routine medical check-ups), and therapeutic care (including emergency health care services) on or off-business premises (including government and non-profit institutions serving households).

HC.6.9 All Other Miscellaneous Public Health Services

This item comprises a variety of miscellaneous public health services, such as operation and administration of blood and organ banks, and the preparation and dissemination of information on public health matters not classified elsewhere. Includes: public health environmental surveillance and public information on environmental conditions.

HC.7 Health Administration and Health Insurance

Health administration and health insurance are activities of central and local authorities, social security and private insurers. Included are the planning, management, regulation, collection of funds and handling of claims of the delivery system. It is to be noted that this function does not cover administration of individual hospitals and health institutions. Expenditure on administration of such institutions are included in the respective services provided by them.

HC.7.1 General Government Administration of Health

This category includes HC.7.1.1 General government administration of health (except social security) and HC.7.1.2 Administration, operation and support activities of social security funds. HC 7.1.1 comprises a variety of activities related to government administration of health such as formulation, administration, coordination and monitoring of overall health policies, plans, programmes and budgets. Expenditure on this function is generally recorded under "Direction and Administration", in Indian budget documents. HC 7.1.2 comprises of the administration, operation and support of social security funds covering health services.

HC.7.2 Health Administration and Health Insurance: Private

This category includes administration and operation of private social health insurance (HC.7.2.1) and other private health insurance (HC.7.2.2)

Health Related Functions

HC.R.1 Capital Formation of Health Care Provider Institutions

The ICHA-HC classification scheme separates those functions that directly involve current health care from those that are related to the health infrastructure. Fixed capital formation for health care provider institutions is used to build/rebuild the physical facilities of hospitals and other providers of health care functions. Fixed capital investments for institutions performing health-related functions, such as construction and equipping of research and training facilities, should be included in HC.R.2 to HC.R.5. This category involves spending by both private and public sector providers on capital formation. The value of fixed capital is used during the life span of a building or equipment. So ideally the monetary value should be distributed over the life span of the product and depreciation charged thereof should be estimated. In India such estimates are not practical for the public sector. Hence the Indian NHA reports capital expenditure incurred on public providers in the concerned year under this category. While private providers generally use depreciation to account for capital expenditure, in India such data is not available. In any case the cost of capital expenditures in the private for profit sector is reflected in the prices they charge their patients and hence captured by household health expenditure surveys.

HC.R.2 Education and Training of Health Personnel

This item comprises provision of education and training of health personnel, including the administration, inspection or support of institutions providing education and training of health personnel. Expenditure of or for medical colleges/teaching hospitals should not be included in education expenditure, except to the limited extent that they are directly and specifically related to the training of medical personnel. In particular, all costs of patient care other than general expenses of academic hospitals should be excluded from the education figures. Expenditure for research in medical colleges should also be excluded, except that no attempt should be made to distinguish between the research and non-research portions of the time of teaching staff whose compensation is otherwise considered part of education expenditure. Though this category includes spending by both the public sector and private sector, the Indian NHA has included only expenditure incurred by the public sector due to paucity of data related to private sector. It may be noted that private sector, mainly through fees paid by households could be a major source of funds for education and training. It is normally difficult to differentiate between expenditure on curative care,

education and research in teaching hospitals as many of the resources are shared by the different functions. In the Indian NHA, spending on different functions of teaching hospitals in the public sector is differentiated by the budgetary heads under which expenditure is recorded. Expenditure recorded under the minor head "hospitals and dispensaries" is considered as expenditure on curative care. Spending on education and research by teaching hospitals are recorded under the sub-major head "Medical Education, Training and Research".

HC.R.3 Research and Development in Health

This item comprises research and development programmes directed towards the protection and improvement of human health. It includes R&D on food hygiene and nutrition and also R&D on radiation used for medical purposes, biochemical engineering, medical information, rationalisation of treatment and pharmacology as well as research relating to epidemiology, prevention of industrial diseases and drug addiction. While, this category comprises of spending by both public and private sector, the Indian NHA has focussed on the public sector alone due to paucity of data related to private sector. Included are expenditures on research institutions in the public sector such as ICMR. Expenditure on collection of data for monitoring which can be an input for further research is not included here, but under administration as monitoring is an administrative function. Research is carried out in medical colleges and other academic institutions. However only expenditure explicitly earmarked for research is included in this category even though resources and facilities primarily for curative care or education may be used for carrying out research. For example, consider the case of a faculty who carries out research using facilities of the medical college. Expenditure on salary of the faculty and maintenance of facilities will be booked under curative care or education depending upon which function they are primarily meant for. However, if the research grant is used to pay part of costs related to salary or maintenance of facilities, such expenditure is included under research function.

HC.R.4 Food, Hygiene and Drinking Water Control

This item comprises a variety of activities of a public health concern that are part of other public activities such as inspection and regulation of various industries, including water supply. In the Indian context, this includes expenditure on regulatory and monitoring agencies responsible for quality assurance of food and drinking water under central, state and local governments.

HC.R.5 Environmental Health

This item comprises a variety of activities of monitoring the environment and of environmental control with a specific focus on a public health concern. Includes: safety measures and monitoring of health hazards connected to waste management; safety measures and monitoring of environmental standards or

other quality norms related to waste water management; pollution abatement activities relating to the prevention, monitoring, abatement and control of noise and the pollution of air, water bodies and soil; R&D in public health issues of environmental protection; production and dissemination of public information about health risks associated with environmental situation.

Key Issues in Classification of Health Care Functions

- Among the personal health care classes (HC.1-HC.3), most care in India is curative; currently rehabilitative care and long-term care do not play a major role, and are difficult to quantify. With exception of specialized rehabilitation centres most rehabilitative care is provided alongside curative care and hence difficult to differentiate. The definitional line between curative and rehabilitative care is also difficult to distinguish There are a variety of episodes of care that may be loosely defined by either one of these categories. For example, a hip replacement surgery may be intended to both relieve/reduce the symptoms of an injury (curative function) as well as improving the functional levels of the patient (rehabilitative function). It is difficult to differentiate services provided by specialized rehabilitative centres from long term care as the latter is also subsumed under such services. Long-term care is not easy to account for in the Indian context because it is primarily administered at home and not monetized. Caregivers are usually unemployed family members, and placing a valuation on their labor is problematic; these expenditures are usually not included in health accounts. Currently rehabilitative care and long term nursing care have been clubbed together in the Indian NHA. They may have more relevance in future given increasing requirement of such services in the context of epidemiological and demographic transition in the country. As of now spending on rehabilitative and long term nursing care provided through hospitals is included under curative care. Only spending specially earmarked for rehabilitative and long term nursing care institutions and programs are differentiated from curative care
- Classification by modes of production is problematic in the Indian context. Current data collection mechanisms does not differentiate day care from other modes of production. Data on episodes of outpatient, inpatient care and home care and household expenditure on such care is available from NSSO household surveys. However it is difficult to differentiate spending on various modes especially in the public sector as outpatient, day care and inpatient care are provided in many cases through the same institutions. The Indian NHA therefor currently does not differentiate between the different modes of production but provide aggregate estimates of spending on curative as well as rehabilitative and long term nursing care.
- HC.4 and HC.5 refer to ancillary care services and medical goods provided to outpatients alone. They are intended to measure final consumption, outside an institutional setting, of drugs and ancillary services purchased by

consumers or third-party payers on their behalf. Drugs and diagnostics in hospitals are considered as inputs (intermediate consumption) to the production of health care in hospitals. Consequently, drugs and diagnostics paid through hospital budgets are not identified separately but are classified as hospital expenditure. Similarly, expenses of physicians' and dentists' practices, including drugs and diagnostics, are considered to be expenditure for physicians' and dentists' services. Drug expenditure for vaccines and medicines provided under public health programs are included under HC.6.

- Patients often incur transportation costs, and it is not clear whether and how these expenses should be classified. The current NHA only accounts for these transportation costs when they are reimbursed. However, since this could be an important area of concern, such costs may be shown separately.
- Components of preventive care are currently embedded in curative care. HC.6 Prevention and Public Health Services includes only preventive care services that are offered as part of public health programs. Personal preventive care such as vaccinations for travel or screening for a disease requested on the patient's own initiative are included under curative care.
- Sub-categories of prevention and public health services overlap and are not mutually exclusive. For example: in India, the immunization programs are included under maternal and child health programs which are normally classified under HC.6.1. However immunization programmes should be included under HC.6.3 Prevention of Communicable Diseases as per SHA guidelines. Similarly the School AIDS Education Program which is a component of the National AIDS Control program is also included under HC.3 rather than HC.6.2 School Health Services.
- In India, capital expenditure included in budget books usually refer to expenditure on buildings. Expenditure on other items such as equipment which would theoretically be classified under capital expenditure are usually included under "revenue expenditure".
- Routine surveys are part of the information system, which falls under the ambit of the stewardship functions of the government and should be therefore included under HC.7.
- An exhaustive classification scheme will include a category for every type of expenditure, although in practice there may be instances in which the NHA team cannot assign certain expenditures to a specific category. The ICHA scheme allows for this by including an additional category, "not specified by kind" or n.s.k. However, use of this category must be kept to a minimum, as overuse will compromise the validity of the estimates. As NHA is repeated over time, data quality can be improved and the n.s.k. category can be phased out of the classification process.

Aggregate Measures of National Health Expenditure

The functional classification is the basis of establishing aggregate measures of health expenditure. They are summary figures which provides a snapshot view of the size and growth of the health system. The OECD SHA proposes three measures of health spending for use in international comparisons:

- **Total Expenditure on Personal Health Care (TPHE):** This is the sum of expenditures classified under categories HC.1 to HC.5 and covers spending for goods and services directed at the care of specific individuals.
- **Total Current Expenditure on Health (TCHE):** This measure is the sum of expenditures classified under categories HC.1 to HC.7. Thus, it includes the spending for personal health care defined above, plus spending for collective health services and for the operation of the system' financing agents.
- **Total Expenditure on Health (THE):** This aggregate includes TCHE plus capital formation by health care provider institutions (HC.R.1)

The Producers Guide recognized that some countries would want to estimate total health spending inclusive of some health-related activities in addition to capital investment. Activities such as medical education and health-related professional training, health-related research, and health-related nutritional or environmental programmes may be seen as integral parts of the health system that should be included in national estimates of total health expenditure. The aggregate measure that best addresses the needs and concerns of national policy-makers has been termed as **National Health Expenditure (NHE).** This aggregate may be TCHE or THE, or it may include any of the health-related functions in the ICHA-HC classification or the national variant of that classification, as long as the measure itself is consistent over time, well defined, and explained to users of the accounts. In Indian NHA, national health expenditure includes in addition to THE, spending on medical education and health-related professional training and health-related research. An illustration of aggregate measures of national health expenditure is given in Table 3.3.

Table 4.3: Aggregate Measures of Health Expenditure: India 2001-02

Code	Health Functions	Expenditure in Rs. Million
HC.1-5	Personal Health Services	842,409
TPHE	**Total Personal Expenditure on Health (HC.1-5)**	**842,409**
HC.6	Prevention and Public Health Services	146,451
HC.7	Health Administration and Health Insurance	32,751
TCHE	**Total Current Expenditure on Health (HC.1-6)**	**1,021,611**
HCR.1	Capital Expenditure	12,192
THE	**Total Expenditure on Health (HC.1-6 + HCR.1)**	**1,033,803**
HCR.2	Education and Training of Health Personnel	18,699
HCR.3	Research and Development in Health	3,954
HCR.4	Food, Hygiene and Drinking Water Control	885
NHE	**National Health Expenditure (THE+HCR.2-4)**	**1,057,341**
Source: National Health Accounts, India 2001-02		

References

1. Guide to producing national health accounts, with special applications for low-income and middle-income countries, World Health Organization, 2003- Chapter-4
2. National Health Accounts Training Manual, PHR Plus, 2003. Unit 4
3. A System of Health Accounts, Version 1. OECD, 2000
4. SHA Guidelines: Practical guidance for implementing A System of Health Accounts in the EU (2004) produced by the Office for National Statistics (UK) - Chapter 3 and 6-16
5. National Health Accounts India: 2001-02, Government of India, 2006

Chapter Four Exercises

This unit has discussion type exercises. The discussion questions are intended to facilitate a discussion on boundaries and issues to be considered while including an activity under a NHA functional class in the Indian context. Discuss under which ICHA functional classes would you include expenditure incurred in the following examples. Note that an example may cover one or more functional categories.

Question One

A patient undergoes surgery in a private hospital and is admitted for a week for post surgical care. He is billed by the hospital for operation theatre charges, doctor fees, nursing care charges, drugs and surgical consumables, room charges, diet charges and CT scan charges

Question Two

A patient seeks outpatient treatment from a private doctor's clinic. She is billed Rs. 50 for consultation and Rs.50 for drugs dispensed from the clinic. In addition she spends Rs.70 for an X-Ray prescribed by the doctor at a nearby diagnostic laboratory.

Question Three

A patient undergoes cataract surgery in a private hospital. He is provided spectacles and drugs by the hospital post operatively. Expenditure for these services is reimbursed by the government under the national blindness control programme.

Question Four

A patient with continuous cough and fever consults a private doctor. Doctor prescribes an X-ray and a sputum test from a nearby diagnostic centre. The test results indicate patient is suffering from tuberculosis. The doctor refers the patient to a government hospital where drugs are provided free of cost under the national tuberculosis programme. In addition doctor also prescribes a tonic which the patient purchases from a pharmacy.

Question Five

A district hospital spends Rs. 2 crore on salaries, drugs and other incidental expenses for fiscal year 2005-06. Rs.20 lakhs is spent on administration of hospital. In addition it also spends Rs. 1 crore in constructing a new inpatient

ward. The hospital also receives Rs. 25 lakhs for providing free sterilization under the RCH program.

Question Six

The Directorate of Medical Education of a State government spends Rs.300 crore in the year 2007-08. Of this, Rs. 10 crore is spent on direction and administration of the Directorate, Rs. 200 crore on provision of hospital services, 50 crores on medical education, Rs. 25 crores on construction of new hospital buildings and Rs.15 crores on construction of buildings for new nursing colleges

Question Seven

Facility surveys carried out annually by the health department for monitoring availability of services in hospitals

Question Eight

Activities taken up by the health department to prevent food adulteration

Question Nine

Training provided to doctors for improving skills in “No scalpel vasectomy” under the RCH program

Question Ten

Consider two scenarios wherein one child receives vaccination free of cost at a PHC under the RCH programme and the other child receives vaccination at a private hospital on payment for the service. How will you classify expenditure incurred in the above two scenarios.

Chapter Five

Classifying Entities in the Health System

Learning Objectives

- (ICHA) for Financing Sources, Financing Agents and Providers and its coding system as adapted in India
- Identify and classify Financing Sources, Financing Agents and Providers
- Understand flexibility in NHA Approach to Classification which allows nationally relevant categories within broader ICHA categories
- Acquire an overview of Financing Sources, Financing Agents and Providers in the Indian context

Module Outline

- Differentiating between Financing Agents and Financing Sources
- Classification of Financing Sources
- Classification of Financing Agents
- Classification of Providers
- Flexibility in NHA approach to Classification of health care entities

Time Requirements

- In Session
  - Presentation: 60 minutes
  - Exercises: 60 minutes

Note To Faculty

In the previous chapter, the functional classification of health care (ICHA-HC) was introduced as a way to group activities and transactions in the health accounts by the nature of those activities and transactions. In this chapter, classification schemes are introduced as ways to categorize the various actors in the health care system — financing agents, providers, and financing sources.

Draw attention to the classifications developed by the by the Producers Guide and its adaptation by the Indian NHA. Emphasize that the Indian NHA closely follows the classification adopted by the Producers Guide with minor modifications. Use the examples of these modifications to demonstrate flexibility in the NHA approach to classification. This chapter should provide the ground for more detailed treatment of various financing agents in the Indian context in the subsequent chapters. Exercises should focus on making the trainees familiar with the coding methodology used in classification. Facilitate discussion on various categories using examples from the Indian and State specific contexts.

The previous chapter focussed on classification of health care functions and its role in establishing aggregate measures of national health expenditure. In this chapter classification of the other three major entities are discussed- financing sources, financing agents and providers.

Differentiating Between Financing Sources and Agents

The SHA Manual provides two options for classifying source of finance for health. The first option is the **Financing Agent** method where the source of financing is classified based on the funding unit that pays the final provider of health care. The second option is the **Primary Source of Funding** method where the classification is based on the funding unit from which the money ultimately is sourced. The SHA manual recommends the Financing Agent method. This is because for most OECD countries the differentiation between financing agents and financing sources would be of little interest. Governments are the source of the largest part of health care financing through general and earmarked taxation and mandatory contributions in most OECD countries. Also, the sources of financing are stable and change little over time. These conditions do not apply to developing countries like India as governments provide less than one fourth of the total health expenditure from taxation. In addition, the composition of sources of financing may change significantly over period of time. Hence, it is useful to differentiate between Financing Sources and Financing Agents in the Indian context.

Classification of Financing Sources

In India funds for health care flows from three major sources:

- FS.1 Public Funds
- FS.2 Private Funds and
- FS.3 Rest of the World Funds

FS. 1 Public Funds

FS.1 covers all public funds and is divided into two- territorial government funds (FS 1.1) and other public funds (FS 1.2). FS.1.1 captures all funds generated as general revenue of territorial governments at three levels- central (FS.1.1.1), state (FS.1.1.2) and local (FS.1.1.3). Local government funds are further divided into that of urban local bodies (FS.1.1.3.1) and panchayati raj institutions (FS.1.1.3.2). It may be noted that revenues of lower level of governments may also include grants from higher levels. For instance: state government revenues include grants from central government and local government revenues include grants from both the central and state governments. While classifying health expenditure by financing sources, expenditure is included under the ultimate source of funds. So, though local bodies spend on health, if funds for health come

from central or state government, they are classified accordingly. Here, local bodies can act both as a financing source as well as a financing agent- a financing source when funds they raise through taxes and fees are used for health and a financing agent when it manages funds from different sources to pay for health care. The financing source of health programmes financed through loans taken by governments from donor and other financial agencies are the respective governments as it is incumbent upon them to repay the loans

Other Public Funds (FS.1.2) include funds generated as interest on trust funds or other assets held by government health entities. For example: funds accruing to government hospitals from leasing of premises for commercial activities which is used for maintenance of hospitals. Given limited availability of data, this category has been currently excluded from the Indian NHA

Table 5.1: Classification Scheme of Financing Sources in India

Code	Financing Sources
FS.1	PUBLIC FUNDS
FS.1.1	Territorial Government Funds
FS. 1.1.1	Central Government Revenue
FS.1.1.2	State Government Revenue
FS 1.1.3	Local Government Revenue
FS.1.1.3.1	Urban Local Bodies Revenue
FS.1.1.3.2	Panchayati Raj Institutions Revenue
FS.1.2	Other Public Funds
FS.2	PRIVATE FUNDS
FS 2.1	Employer Funds
FS.2.2	Household Funds
FS.2.3	Non-Profit Institutions Serving Households (NGO)
FS.2.4	Other Private Funds
FS.3	REST OF THE WORLD (External Assistance)

FS.2 Private Funds

Private funds include employer funds, household funds, NGO funds and other private funds. Employer funds (FS.2.1) include funding for health care activities financed directly by firms either by operation of its own health care facilities or reimbursement of medical expenses of employees and contributions to public and private social insurance programmes. Employer funds for health includes contribution from both private and public sector firms.

Household funds (FS.2.2) include direct payments to providers, social security and private insurance contributions. Category FS.2.3 is for funds provided for health by NGOs from their own resources. It may be noted that NGOs are primarily financing agents raising funds from multiple sources. However in some cases NGOs raises revenues through commercial activities or through returns from their corpus funds. Such funds used for health are categorized under FS.2.3

Other private funds (FS.2.4) includes the private capital market, which contributes interest payments on assets held by private-sector health system actors. It also captures net flows of private-sector loans used by providers or insurers to cover current expenses. Given limited availability of data, this category has been currently excluded from the Indian NHA

FS.3 Rest of the World Funds

Funds that come from outside the country for use in the current year are classified under FS.3. Rest of the World funds include grants from bilateral and multilateral agencies as well as funds contributed by institutions and individuals outside the country. Remittances from family members abroad are, however, categorized as household funds FS.2.2. Loans from international funding agencies are classified under entities which are responsible for their repayment.

Classifying Financial Agents

The classification scheme for financing agents allows categorization of entities that pay for or purchase health care. Financing agents include institutions that pool health resources collected from different sources, as well as entities such as households and firms that pay directly for health care from their own resources.

The classification of financing agents adopted by the Producers Guide is based on the OECD International Classification for Health Accounts classification scheme for financing agents (ICHA-HF). The ICHA-HF classifies financing agents into three broad groups- public sector (HF.1), private sector (HF.2) and rest of the world (HF.3). The public sector comprises of agencies of territorial governments- central, state and local and social security funds. Private sector includes all other insurance programs except social security, households, NGOs and firms. In the ICHA-HF scheme activities in which governments act in a fashion similar to private firms are classified as private activities. Thus, health insurance programmes for government employees are counted as private social insurance, and parastatal firms are classified as private firms. In some countries health insurance of government employees and health expenditure of parastatals are included in budgets. Taking cognizance of the need for policy makers to have them included under government spending, the Producers Guide suggested reorganization of financing agents within health accounts of such countries. The Guide introduced the concept of a public sector (HF.A) and nonpublic sector (HF.B) to the ICHA-HF scheme and assigned government employee health insurance schemes to subcategory HF.2.1.2; parastatal firms to subcategory

HF.2.5.1 and private firms to subcategory HF.2.5.2. The public sector is generated by combining total government (HF.1) with HF.2.1.1 and HF.2.5.1; the nonpublic sector is generated by subtracting HF.2.1.1 and HF.2.5.1 from the private sector (HF.2). These steps allow policy-makers to look at all government activities combined and at the same time ensures comparability with results from other countries.

The Indian NHA has basically adopted the ICHA-HF scheme incorporating some elements of the classification proposed by the Producers Guide as well as minor modifications in line with data availability and policy requirements. In the Indian NHA, the government employee health insurance scheme which is included under private social insurance in ICHA-HF has been differentiated and classified as part of social security schemes under the public sector. However, parastatals continue to be classified as part of the private sector as in the ICHA-HF. The Indian NHA currently does not include Rest of the World as a financing agent as their role in the country is primarily as a financing source.

Territorial Government

Financing Agents classified under territorial government (HF.1.1) include government agencies at the central, state and local levels. In India, the Ministry of Health and Family Welfare (HF 1.1.1.1) is the primary financing agent of the central government. The Ministry of Health and Family Welfare is divided into three departments- health & family welfare, AYUSH and health research. Other Central Ministries (HF 1.1.1.2) include ministries of defence, railways, labour etc.

At the State Government (HF.1.1.2) level, the Department of Health and Family Welfare (HF.1.1.2.1) is the primary financing agent. The State Department of Health and Family Welfare is comprised of a number of sub departments (directorates, commissionerates and autonomous bodies) demarcated based on functional roles. The number of sub departments and their roles vary from State to State. Broadly there are sub-departments for health and family welfare, medical education, AYUSH and drug control administration. In addition there are a number of societies for implementation of centrally sponsored family welfare and disease control programmes. With the introduction of NRHM, all societies except that for AIDS control have been merged under the State Health Society. Other State Departments (HF.1.1.2.2) include department of labour which implements the ESI schemes. Other departments such as tribal welfare, rural development, home affairs etc., are financing agents for health care in some States.

Local Bodies (H.F.1.1.3) include Municipal Bodies (H.F.1.1.3.1) and Panchayati Raj Institutions (H.F.1.1.3.2). In India, they generally fund primary care services and public health programmes. However, in some States, they are responsible for funding and management of secondary and tertiary care services.

Table 5.2: Classification of Financing Agents in ICHA and Indian NHA

Code	ICHA-HF Classification	Code	Indian NHA Classification
HF.1	**General Government**	HF 1	**Public Sector**
HF.1.1	Territorial Government	HF 1.1	Territorial Government
HF.1.1.1	Central Government	HF 1.1.1	Central Government
		HF 1.1.1.1	Ministry of Health and Family Welfare
		HF 1.1.1.2	Other Central Ministries and Divisions
HF.1.1.2	State/Provincial Government	HF 1.1.2	State Government
		HF 1.1.2.1	State Department of Health
		HF 1.1.2.2	Other State Departments and Agencies
HF.1.1.3	Local/Municipal Government	HF 1.1.3	Local Government
		HF 1.1.3.1	Urban Local Governments
		HF 1.1.3.2	Panchayati Raj Institutions
HF.1.2.	Social Security Funds	HF 1.2	Social Security Funds
		HF 1.2.1	Government Employee Insurance Schemes
		HF 1.2.2	Employees State Insurance Corporation
		HF 1.2.3	Universal Health Insurance Scheme
		HF 1.2.4	Other Social Security Funds
HF.2	**Private Sector**	**HF 2**	**Private Sector**
HF.2.1	Private Social Insurance	HF 2.1	General Insurance Corporation (GIC)
HF.2.2	Other Private Insurance	HF 2.2	Private Insurance Companies
HF.2.3	Private households' out-of-pocket payment	HF 2.3	Private/Household’ out-of pocket Payment
HF.2.4	Non-Profit Institutions Serving Households (other than social insurance)	HF2.4	Non Governmental Organizations providing health care services
HF.2.5	Private firms and corporations (other than health insurance)	HF2.5	Public and Private Firms and Corporations
HF.3	**Rest of the World**		

Financing Agents Managing Health Insurance Functions

Health insurance is a financing mechanism to minimize uncertainty of illness and cost of treatment. In insurance, there is pre-payment and pooling. So people pay a small amount when they are healthy. This contribution is shared among many people and is used to meet the health care costs of the enrolled members, when they need it. The financing agent is the institution that organizes the insurance, collect and pool the revenue and purchase health care from a provider. It could be an entity within the government, a parastatal body, a private company, a voluntary organisation or even a community based organisation. Sometimes the provider acts as the financing agent as in the case of employer managed facilities.

Financing Agents managing health insurance can be divided into two broad categories

- Social Health Insurance
- Private Voluntary Health Insurance

An insurance programme is designated as a social insurance programme if at least one of the following conditions is met:

1. participation is compulsory by law or by condition of employment;
2. the programme is operated on behalf of a group and is restricted to group members; or
3. an employer makes a contribution to the programme on behalf of an employee.

There are two types of social health insurance - public (social security) and private health insurance. Social security funds constitute special kinds of institutional units which may be found at any level of government — central, state or local. Key features of social security schemes include the following:

- They cover the community as a whole or large sections of the community
- They are imposed and controlled by government units.
- They generally involve compulsory contributions by employees or employers or both
- The government exerts control over payment rates, participating providers, and terms on which benefits are paid to recipients
- The schemes cover a wide variety of programmes, providing benefits in cash or in kind for old age, invalidity or death, survivors, sickness and maternity, work injury, unemployment, family allowance, health care, etc.
- There is usually no direct link between the amount of the contribution paid by an individual and the risk to which that individual is exposed.
- They are separately organized from the other activities of government units and hold their assets and liabilities separately from the latter. They are separate institutional units because they are autonomous funds, they have

their own assets and liabilities and engage in financial transactions on their own account.

In distinguishing between social security and private social health insurance, two factors are important: the intent of the programme and the control of the programme. Thus, if the beneficiaries of a scheme which cover the large part of the community and which are imposed and controlled by government units are eligible for a reason other than employment at a government entity, then the scheme would be social security (HF.1.2) If the government does not control the scheme or if it merely requires that the scheme be in place, perhaps with some broad guidelines or if some other entity exercises the principal control over the operation of the programme, then the scheme should be classified as private social health insurance (HF 2.1).

Employers contribute to social health insurance in several ways.

- They may contribute to social security (HF 1.2) schemes on behalf of employees as mandated by law. An example social security in India is the mandatory contributions to the ESIS
- Employers may institute group health insurance schemes to which they contribute on behalf of employees as per terms of employment. Since contribution is made on behalf of the employees, this is a mechanism of social health insurance. As contributions to such schemes are based on terms of employment rather than mandated by law, they are classified as private social health insurance (HF. 2.1). In India, these insurance schemes are generally managed by either the employer themselves or by public and private sector insurance companies which in addition to group insurance health schemes also offer private voluntary health insurance schemes (HF 2.2). Since both schemes are offered by the same entities rather than follow ICHA guidelines of classifying these financing agents separately, the Indian NHA has sought to differentiate between public sector insurance companies under the umbrella of the General Insurance Corporation (HF. 2.1) and private sector insurance companies (HF.2.2). This classification may have to be revised in future as currently there is limited scope of classifying nonprofit social insurance organizations. Similarly, according to ICHA guidelines social health insurance schemes covering both government and private employees are to be included under HF 2.1. However in the Indian NHA, government employee insurance schemes are included under social security schemes (HF 1.2). Though the SHA recommends that programmes set up by governments for their employees only are not to be regarded as social security funds, government employee insurance schemes in India satisfy other criteria of a social security schemes such as government control over payment rates, participating providers, and terms on which benefits are paid to recipients as well as mandatory coverage[1] .

[1] Mandatory coverage is more by default rather than law in case of schemes like the

- Thirdly they may directly cover risk by managing health care facilities of employees or by reimbursing costs of health care availed by employees. The financing agents in this case are the employers themselves whether public or private sector firms (HF 2.5)

A private voluntary medical insurance scheme is one where individuals join by their own wish and pay from their own resources. Community based health insurance schemes are classified as a private voluntary insurance scheme if enrollment is voluntary and as a private social health insurance scheme if the programme is operated on behalf of a group and is restricted to group members.

Private/Household' Out-of Pocket Payment

In India households are the major financing agents as bulk of the health care is directly purchased by them from providers. Other mechanisms where households act as financing agents include cost-sharing co-insurance, co-payments and deductibles under health insurance schemes.

Non Governmental Agencies Providing Health Care

They consist of non-profit institutions which provide goods or services to households free or at a cost lower than market rates. NGOs pool money from a variety of sources and in the Indian context mostly provide services directly. In some cases they may serve as an intermediary which finances other NGOs. When social insurance agencies are organized as non-profits they are classified under private social health insurance. When non-profits provide health services to their employees through their own facilities they are classified under HF 2.5.

Classification of Health Care Providers

Health care providers are classified based on functions of care or services performed by them. However, in many cases providers deliver more than one service, some of them outside the health accounts boundary. In classification of such entities, the key is to isolate health expenditure from other expenditure of the entity and then breakdown health expenditure by functions. The classification of the entity into a provider category will be based on which health care function, the entity spends more. Some examples are given below to illustrate classification of provider with mixed activities.

- A medical college provides inpatient and outpatient care, education and research. Since major expenditure is on hospital services, the medical college will be classified as a hospital rather than an educational and training institution or a research institution

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Central Government Health Scheme (CGHS). Individuals can opt out of the CGHS though in reality such attrition is low.

- A nursing college may incur spending on research, however its primary activity is education and hence is classified as an educational institution.
- A Community Health Centre (CHC) provides inpatient and outpatient care in both allopathic and ISM streams of medicine and implements public health programme. Since primary activity of CHC is provision of secondary level curative services it is classified as a hospital.

In some cases there are providers within providers and the decision on how to classify such providers is based on the concept of independent economic unit. Take the example of two government hospitals. The first hospital runs its own pharmacy using funds allotted to it by the government and managed by its own staff. In the second hospital, the government has out-sourced pharmacy services to a third party which has its own management and financial systems. In the first case, the pharmacy will be classified under HP.1 Hospitals as it is managed as part of the hospital operations. In the second case, the pharmacy will be classified under HP.4 Retail Sale and Other Providers of Medical Goods and not HP.1 Hospital as it operates with some independence from the hospital and presents independent financial statements.

Table 5.3 Indian Classification of Health Providers (HP) based on ICHA

HP 1 Hospitals
HP 1.1 General Hospitals
HP 1.1.1 Hospitals under Central Government
HP 1.1.2 Hospitals Owned by State Government
HP 1.1.3 Hospitals Owned by Local Bodies
HP 1.1.3 Hospitals under Social Insurance
HP 1.1.4 Hospitals owned by Public or Private Firms
HP 1.1.5 Private Hospitals (private for profit entities)
HP 1.1.6 Hospital owned by Charitable Institutions/NGOs
HP 1.2 Mental Hospital
HP 1.2.1 Government Mental Hospitals
HP 1.2.2 Mental Hospitals owned by Private for Profit Sector
HP 1.2.3 Mental Hospitals owned by Private Non Profit Sector
HP 1.3 Other Specialty Hospitals
HP 1.3.1 Specialty Hospital for Cancer
HP 1.3.2 Specialty Hospital for Tuberculosis
HP 1.3.3 Specialty Hospital for other Diseases

HP 1.4 Hospitals in Indian System of Medicine (ISM)
HP 1.4.1 Hospitals owned by Central/State Government
HP 1.4.2 Hospitals owned by Local Bodies (ISM System)
HP 1.4.3 Hospitals under Social Insurance (ISM System)
HP 1.4.4 Hospitals owned by Private for Profit Entities (ISM System)
HP 1.4.5 Hospital owned by Charitable Institutions/NGOs (ISM System)

HP 3 Providers of Ambulatory Health Care

HP 3.1 Private Doctors
HP 3.1.1 Physicians dealing with Allopathic System of Medicine
HP 3.1.2 Physicians dealing with ISM System of Medicine
HP 3.2 Dentists
HP 3.3 Other Paramedical Personnel
HP 3.3.1 Optometrist
HP 3.3.2 Occupational and Speech Therapist
HP 3.3.3 Physiotherapists
Hp 3.3.4 Nurses
HP 3.3.5 Dental Hygienist
HP 3.3.6 Traditional Medicine (without doctors approbation)
HP 3.3.7 Naturopaths Offices
HP 3.3.8 Mid wives Offices
HP 3.3.9 Chiropractors
HP 3.3.10 Dietitians
HP 3.3.11 Nutritionists
HP 3.3.12 Non-qualified Medical Practitioners
HP 3.3.13 Others
HP 3.4 Outpatient Care Centres
HP 3.4.1 Family Welfare Centres
HP 3.4.1.1 Maternity Homes
HP 3.4.1.2 Post Partum Centres
HP 3.4.1.3 Sub Centre/ Health Posts
HP 3.4.1.4 Mobile Clinics

HP 3.4.2 Outpatient Mental Health and Substance Abuse Centres
HP 3.4.3 Free Standing Ambulatory Care Centres
HP 3.4.5 Dispensaries and Other OP Community/Integrated Care Centres
HP 3.4.5.1 Govt owned Other OP Community/Integrated Care Centres
HP 3.4.5.2 Dispensaries/Clinic owned by Industrial Firms
HP 3.4.5.3 Dispensaries/Clinic owned by NGOs
HP 3.4.5.4 Dispensaries/Clinic in Private Sector
HP 3.5 Diagnostic Centres and Pathological labs
HP 3.5.1 X Ray/CT Scan/ Other Diagnostic Scanning Centres
HP 3.5.2 Medical Pathological Labs
HP 3.6 Providers of Home Health Care Services
HP 3.6.1 Community/Domiciliary Nurse (Private)
HP 3.6.2 Community/Domiciliary Nurse (NGO)
HP 3.6.3 Own/Self
HP 3.6.4 Relatives
HP 3.6.5. Friends
HP 3.9 Other Providers of Ambulatory Health Care
HP 3.9.1 Ambulance Services
HP 3.9.1.1 Ambulance Services by govt bodies/departments
HP 3.9.1.2 Private Ambulance Services
HP 3.9.1.3 Ambulance Services of Industrial Firms
HP 3.9.1.4 Ambulances by NGOs/ Voluntary Agencies
HP 3.9.2 Blood and Organ Banks

HP 4. Retail Sale and Other Providers of Medical Goods

HP 4.1 Dispensing Chemists
HP 4.1.1 Private Medical store Pharmacy (Allopathic System)
HP 4.1.2 Private Medical Store or Pharmacy (ISM)

HP 5 Provision and Administration of Public Health Programmes

HP 6 General Health Administration and Insurance

HP 6.1 Government Administration on Health
HP 6.1.1 Central Government
HP 6.1.2 State Government
HP 6.1.3 Local Bodies

HP 6.2 Social Security Funds
HP 6.3 Other Social Insurance Schemes
HP 6.9 Other Providers
HP 7 All other Industries
HP 8 Institutions Providing Health Related Services
HP 8.1 Research Institutions
HP 8.1.1 Health Research Institutions in Public Sector
HP 8.1.2 Research Institutions by for Profit Private Sector
HP 8.1.3 Research Institutions by Non Profit Private Sector including NGOs
HP 8.2 Education and Training Institutions
HP 8.2.1 Education and Training Institutions for Doctors
HP 8.2.1.1 Education and Training Institutions by MOHFW
HP 8.2.1.2 Education and Training Institutions by State Government
HP 8.2.1.3 Education and Training Institutions by Local Bodies
HP 8.2.1.4 Education and Training Institutions by Charitable Institutions
HP 8.2.1.5 Education and Training Institutions by for Profit Private Sector
HP 8.2.2 Education and Training Institutions for Nurses and Paramedics
HP 8.2.2.1 Education and Training Institutions by MOHFW
HP 8.2.2.2 Education and Training Institutions by Defence Department
HP 8.2.2.3 Education and Training Institutions by State Government
HP 8.2.2.4 Education and Training Institutions by Local Bodies
HP 8.2.2.5 Education and Training Institutions by NGOs
HP 8.2.2.6 Education and Training Institutions by for Profit Private Sector
HP 8.3 Other Institutions Providing Health Related Services
HP 9 Rest of the World
HPnsk Provider not Specified by kind

HP.1 Hospitals

This item comprises establishments primarily engaged in providing medical, diagnostic, and treatment services that include physician, nursing, and other health services to inpatients and the specialized accommodation services required by inpatients. Hospitals may also provide outpatient services as a secondary

activity. Hospitals are classified as General Hospitals (HP 1.1), Mental health and substance abuse hospitals (HP 1.2), Other specialty hospitals (HP 1.3) and Hospitals in the Indian System of Medicine (HP 1.4). These categories are further classified by ownership and/or type of specialization

General Hospitals (HP 1.1) comprises of establishments primarily engaged in providing diagnostic and medical treatment (both surgical and non-surgical) to inpatients with a wide variety of medical conditions. They also include teaching hospitals, army hospitals, prison hospitals, community health centres, rural hospitals, district hospitals as well as those maintained by social insurance, private and nonprofit sector.

Mental health and substance abuse hospitals (HP 1.2), comprises of establishments that are primarily engaged in providing diagnostic and medical treatment, and monitoring services to inpatients who suffer from mental illness or substance abuse disorders.

Other specialty hospitals (HP 1.3) are those providing diagnostic and medical treatment to inpatients with a specific type of disease or medical condition (other than mental health and substance abuse). These include hospitals for cancer, orthopaedics, cardiology, neurosurgery, infectious diseases etc.

Hospitals in the Indian System of Medicine (HP 1.4) include those primarily engaged in providing inpatient health services in Ayurveda, Unani, Siddha and Homeopathy streams of medicine. It may be noted that general hospitals also may provide hospital services in the Indian System of Medicine (ISM). However, such establishments are classified as HP 1.1 as ISM services are secondary to allopathic services.

HP.2 Nursing and Residential Care Facilities

This item comprises establishments primarily engaged in providing residential care combined with either nursing, supervisory or other types of care as required by the residents. In these establishments, care provided is a mix of health and social services with the health services being largely at the level of nursing services. Such facilities are rare in India and are not considered as a separate entity in the Indian NHA classification.

HP.3 Providers of Ambulatory Health Care

This item comprises establishments primarily engaged in providing health care services directly to outpatients who do not require in-patient services. They include offices of allopathic and ISM doctors (HP 3.1), dentists (HP 3.2) and other paramedical professionals (HP 3.3) where outpatient care is provided by the specified health professionals. HP.3 also includes outpatient care centres (HP 3.4), diagnostic and pathological labs (HP 3.5), providers of home care services

(HP 3.6) and other providers such as ambulance service providers and blood bank and organ banks (HP 3.9)

Outpatient care centres (HP 3.4) comprises establishments engaged in providing a wide range of outpatient services by a team of medical, paramedical and often also support staff, usually bringing together several specialities and/or serving specific functions of primary care. These establishments generally treat patients who do not require in-patient treatment. These include family welfare centres, free standing ambulatory care centres, outpatient mental health and substance abuse treatment centres, and other outpatient community and integrated care centres. Family welfare centres include as maternity homes, post partum centres, subsidiary health centres, urban health posts and mobile health centres. Free standing ambulatory care centres include clinics and dispensaries which provide primary care as well as specialized care including surgery on an outpatient basis.

Medical and diagnostic laboratories (HP 3.5) comprises establishments primarily engaged in providing analytic or diagnostic services, generally to the medical profession or to the patient on referral from a health practitioner. These include: diagnostic imaging centres; dental or medical X-ray laboratories; medical testing laboratories; medical pathology laboratories and medical forensic laboratories. Medical and diagnostic laboratories in hospitals are included in HP.1

Providers of home health care services (HP 3.6) comprises of establishments primarily engaged in providing skilled nursing services in the home. They include community nurses and domiciliary nursing care providers.

Other providers of ambulatory care include ambulance service providers and blood bank and organ banks (HP 3.9). In the Indian context, most blood banks and organ banks function as part of hospitals and are classified under HP.1. However, there are few examples of free standing blood banks such as that maintained by Red Cross and other charitable organizations which are classified under HP 3.9.

HP.4 Retail Sale and Other Providers of Medical Goods

This item comprises establishments whose primary activity is the retail sale of medical goods to the general public for personal or household consumption or utilisation. Establishments whose primary activity is the manufacture of medical goods for sale to the general public for personal or household use are also included as well as fitting and repair done in combination with sale. These include dispensing chemists engaged in the retail sale of pharmaceuticals to the general public with and without prescription. HP.4 also includes retail sale and other suppliers of optical glasses & vision products, hearing aids and other miscellaneous goods. However they are not currently not included as separate categories in the Indian NHA as disaggregated data on these items are not readily available.

HP.5 Provision and Administration of Public Health Programmes

This item comprises administration and provision of public health programmes such as health promotion and protection programmes. In the Indian context these include entities within health departments responsible for provision and administration of disease control programs, family welfare programmes, surveillance and epidemic control

HP.6 General Health Administration and Insurance:

Establishments mainly engaged with regulation of activities of agencies that provide health care, overall administration of health policy and health insurance are included here. HP.6.1 Government administration of health comprises of entities involved in government administration (excluding social security) for health policy setting, management of service delivery and enforcing of standards, including regulation and licensing of providers. In the Indian context this includes central ministries as well as secretariat, commissionerates, directorates, drug control administration of State departments responsible for health care. Note that government agencies mainly engaged in providing public health services are classified under HP.5.

Social security funds (HP.6.2) comprises of entities responsible for administration of government mandated social security programmes such as ESIS, universal health scheme etc. Other social insurance (HP 6.3) comprises of entities responsible for administration of all other social insurance except social security. Includes administration of health facilities provided by public & private firms for employees. Other (private) insurance (HP 6.4) are establishments responsible for management of insurance (insurance agents, average and loss adjusters, actuaries, and salvage administration). In India this includes public sector insurance companies under GIC and private insurance companies. All other providers of health insurance (HP.6.9) include private establishments mainly engaged in providing health administration (other than private social and other private).

HP.7 Other Industries (rest of the economy)

This item comprises industries not elsewhere classified which provide health care as secondary producers or other producers. Included are producers of occupational health care and home care provided by private households. In Indian NHA, providers included in this category is currently included in other categories. Establishments as providers of occupational health care services is covered in HP 1.1 and HP 3.4 . Personal health services by member of their own household is covered in HP 3.6.3 and HP 3.6.4.

HP 8 Institutions Providing Health Related Services

These include establishments primarily engaged in research (HP 8.1) and education and training (HP 8.2). These are further classified based on ownership.

HP. 9 Rest of the World

This item comprises all non-resident units providing health care for the final use by resident units. Rest of the world entities as providers are not very relevant in India and hence not currently included in the Indian NHA.

Flexibility in the NHA Approach to Classification

To the extent possible, the NHA tables should follow the ICHA structure. Within the ICHA structure, however, NHA allows countries to adapt the scheme by creating sub- categories for characteristics specific to their health systems. These sub classifications allow countries to include in their NHA system characteristics that they deem important while at the same time maintaining a standardized and internationally accepted framework. For example, ICHA has the category HP.1.1 General Hospitals, but it is not subdivided into "government" and "private". In the Indian NHA this category has been further sub-classified into 6 sub categories (See Table 5.3)

In order to work well, the sub classifications must meet the following criteria:

- Policy relevance. Establishing new sub classifications is extra work and detail so sub classifications should reflect important applications to policy.
- Standards. Sub classifications should, as much as possible, be developed according to international standards and conventions, i.e. ICHA.
- Flexibility. A country's specific needs and interests should be incorporated into a framework that allows for generalizations.
- Mutual exclusivity. Sub classifications should be mutually exclusive and exhaustive so that each transaction can be placed in one – and only one – category.
- Feasibility. It must be possible to collect the expenditure data intended for the sub classification.

These criteria may conflict with one another. It is the responsibility of the NHA team to resolve the conflict in a manner that best preserves the policy relevance of NHA.

References

1. Guide to producing national health accounts, with special applications for low-income and middle-income countries, World Health Organization, 2003- Chapter-4
2. National Health Accounts Training Manual, PHR Plus, 2003. Unit 4
3. A System of Health Accounts, Version 1. OECD, 2000
4. SHA Guidelines: Practical guidance for implementing A System of Health Accounts in the EU (2004) produced by the Office for National Statistics (UK) - Chapter 3 and 6-16
5. National Health Accounts India: 2001-02, Government of India, 2006

Chapter Five Exercises

This unit has discussion type exercises. The discussion questions are intended to facilitate a discussion on boundaries and issues to be considered while classifying entities as a financing agent, financing source and a provider in the Indian context. Discuss the following questions and classify financing agents, financing sources and providers based on classification scheme adopted by the Indian NHA.

Question 1

The Directorate of Health of a State government implementing the 100% centrally sponsored Integrated Disease Control Program (IDSP). Funds for the same was provided by the central Ministry of Health and Family Welfare to the State Government vide the State Health Society.

Question 2

An employee of a public sector firm avails of hospital treatment at a private hospital. He pays the bill; 80% of which is reimbursed by his employer.

Question 3

The Employees State Insurance Scheme which provides medical benefits to insured persons is financed by mandatory employee and employer contributions. In addition the State government also partly finances the ESI scheme. A beneficiary under the scheme receives outpatient care from an ESI hospital.

Question 4

A state government is implementing an emergency health transport scheme which is managed and operated by an NGO. Fifty percent of the operating expenses is met by the central government's National Rural Health Mission. 40% of the expenses is met by the state government. The balance is contributed by the NGO from its own resources.

Question 5

A private firm has subscribed to a Group Health Insurance scheme operated by New India Assurance Company, a public sector insurance company. 80% of the insurance premium is contributed by the firm and 20% by employees. An employee receives hospitalized treatment from a private hospital and the entire bill was settled by the insurance company directly.

Question 6

The State AIDS Control Society (SACS) implements the National AIDS Control Program (NACP) in the State. The NACP is financed through a loan availed by the central government from the World Bank Funds and is routed to SACS through central Ministry of Health and Family Welfare. The SACS provides grants to state government medical colleges and charitable hospitals for providing treatment to HIV patients. SACS also contracts a research organization in the private sector to conduct a study on patient satisfaction related to HIV treatment at the aforesaid institutions.

Question 7

The Indian Council of Medical Research (ICMR), a department of the Ministry of Health and Family Welfare is sponsoring a central government nursing college for conducting research to develop guidelines for nursing practices to be followed in managing patients admitted with burns.

Question 8

A family has enrolled in a health insurance plan offered by a private insurance agency by paying a premium of 10000 Rs. A member of the family had a medical emergency which was managed at a private hospital. The insurance company directly settled the bill with the private hospital.

Question 9

The Department of Health of a state government is restructuring its secondary hospitals with a grant from DfID.

Question 10

A patient receives free treatment from a state government medical college. He however was required to purchase blood from a NGO run blood bank and medicines from a local pharmacy.

Chapter Six
Steps in Implementing NHA

Learning Objectives

- To provide an overview of the steps in implementing NHA
- To enable an understanding of the Indian Health Care System
- To enable an understanding of different types of data required for NHA, their strengths and weaknesses
- To familiarize participants with the general approach to fill the NHA tables
- To be able to identify and resolve some of the key data issues such as double counting and data conflicts

Module Outline

- Sketching the health care system
- Investigating data sources
- Creating a Health Accounts database
- Populating NHA matrices
- Resolving issues

Time Requirements

- In Session
  - Presentation: 45 minutes
  - Exercises: 75 minutes

Note To Faculty

This chapter sets out a strategy for the process of implementing NHA. It describes how Health Accounts could be built up and proposes a five step process for compiling NHA data, starting from zero and finishing with completed tables. Begin by introducing participants to the Indian health care system and its major actors. Emphasize key role of financing agents in the health care system and use the financing agents classification to sketch the key financing agents in India. Provide an overview of health financing data in India to set the context for subsequent sessions on key actors in health financing. Introduce participants to the different data sources for NHA in India; their strengths and weaknesses; and how to choose between available data sources. Having identified the key actors and the data sources pertaining to their financing familiarize participants in organizing data for filling in the NHA matrices. Flag key data issues such as double counting and data conflicts and provide tips on how such issues can be resolved. It may not be possible to cover the whole chapter in one session. In such cases it is suggested that the chapter is divided into two sessions. The first session covering sketch of Indian health care system and data sources for NHA could be taken prior to detailed sessions on key health financing entities in India. The second session on filling up NHA matrices and resolving data issues could be taken up prior to the case studies. The examples used in the case studies provide hands on experience in filling NHA tables and resolving data issues. They address many of the common issues that arise in the process of developing the final NHA tables.

Planning the NHA Process

According to the Producers Guide the principal steps in planning the NHA process is to:

- Set up a NHA Team
- Build a Steering Committee, and
- Develop a Work Plan to Implement NHA

Setting up a NHA Team

The Producers Guide recommends that the NHA team should be drawn from those who are familiar with national economic statistics and accounting practices, those who are knowledgeable about the nation's health system and health policies, and those who have experience with using the data and information generated by different entities in the health system. It is also recommended that the health accounts team should include staff from several different organizations. This variety of background provides access to many different data sources perhaps unknown to one organization, and facilitates a critical appraisal of team results.

Building a Steering Committee

A Steering Committee comprising of senior policy makers from stakeholder organizations can serve as an effective mechanism to keep the NHA exercise on track. Such organizations include the ministries of health, finance and planning; the national statistical office; social health insurance organizations; academic groups; provider and consumer organizations. Key functions of the steering committee include:

- Communicating policy concerns to the NHA team
- Deciding boundaries of health expenditure based on policy requirements
- Providing feedback to the NHA team on results and findings
- Facilitating data collection and validation of available figures
- Assisting in interpreting the NHA results and drawing policy implications

Developing a Work Plan to Implement NHA

A well defined work plan helps to ensure that there is a shared understanding among stakeholders with regard to health boundaries, tasks that constitute the NHA activity, strategies and actions needed to accomplish these tasks, role of NHA team members and timeline for task completion.

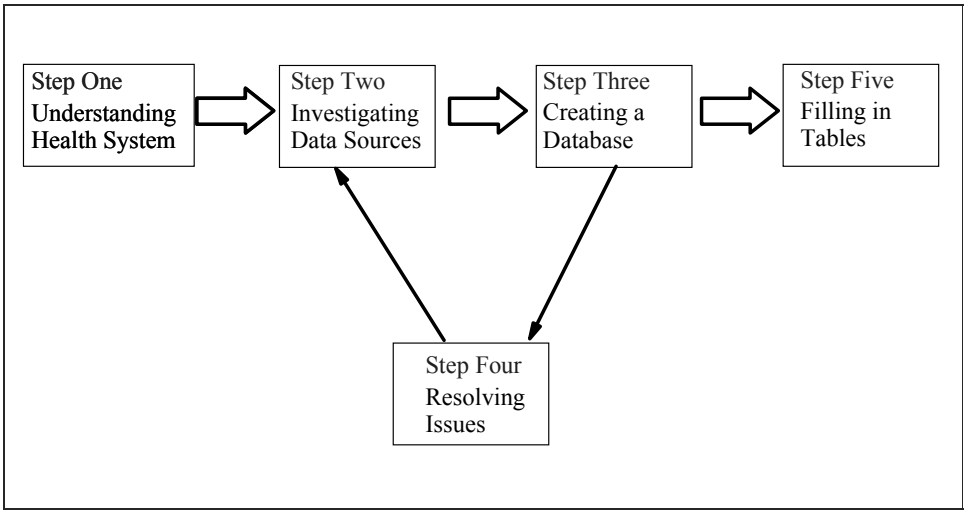
Implementing the NHA

The SHA Guidelines proposes the following five steps for implementation of National Health Accounts.

1. Understanding the health care system under study
2. Investigating data sources
3. Creating a Health Accounts database
4. Resolving issues
5. Filling the tables

Step One and Step Two should be carried out first. The remaining steps follow as an iterative process. An initial compilation of the database using identified data sources is done. Gaps and problem areas in the database will be identified and resolved by searching for new data sources, reconciling and making suitable estimations where necessary. The database gets updated accordingly. This process will be repeated until a final version of the database is achieved. These steps should involve an elaborate and complex system of checks and balances, choices, trial and error to decide how to put all the data together. This system will help determine which data to use and why, and more importantly identify which data sources should not be used and why. Judging the quality of data sources is a key part of this iterative process. The process is graphically represented in Figure 6.1.

Figure 6.1: Process of National Health Accounts Implementation



Source: SHA Guidelines, Office for National Statistics (UK)

Health Care System in India

The first step in implementing the NHA is to map out the health care system under study. Obviously what to include within the boundaries of the health system would have been finalized in the initial planning process. It may be useful to start with identifying financial agents in the health system as they are fewer in number compared to other entities and are more well defined. Using financial agents as the starting point; trace the potential sources of their funds, the providers and services they fund, and their geographical and population coverage. Key financing agents in any health care system include: public sector, private sector and rest of the world. Though rest of the world is not a major financing agent in India, it is a key source of health care funds in India.

Public Sector: Governmental Agencies

Public sector includes governmental agencies at the national, state and local level as well as social insurance schemes promoted by governmental agencies. An example of sketching key financing agents in India, their source of funds and the major providers they fund are given in Table 6.1.

Table 6.1: Financing Agents in Public Sector- Source of Funds & Providers

Financing Agent	Sources of Funds	Major Providers
Central Government		
Ministry of Health and Family Welfare	☐ Central Government ☐ Grants from Donors ☐ Loans from Donors ☐ Fees collected from Households	☐ Central Government Hospitals and dispensaries ☐ Port Health Establishments ☐ Public Health Laboratories, Central Drug Stores ☐ Research Institutions- ICMR ☐ Training Institutions such as national TB training institute, nursing and paramedical colleges ☐ Provision & administration of public health services ☐ NGOs/private sector organizations under PPP ☐ Health Administration through Departments, Directorates and attached autonomous bodies ☐ Manufacturers of Sera/Vaccine

Financing Agent	Sources of Funds	Major Providers
Other Central Ministries. Example: Department of Science & Technology	☐ Central Government	☐ Hospitals ☐ Dispensaries ☐ Education and Training Institutions ☐ Research Institutions ☐ Provision & administration of public health services
State Departments of Health	☐ State Government ☐ Central Government vide MoHFW, Finance Commission Grants, PMGY ☐ External Aid routed through MoHFW ☐ Direct donor grants ☐ Loans from donor agencies ☐ Loans from financial institutions such as NABARD	☐ Secretariat, Directorates, Comissionerates, Drug Control Administration and district administration ☐ Societies- SACS, NRHM Societies, RKS ☐ PHC/CHC/District and Sub district Hospitals ☐ Teaching/Specialty Hospitals ☐ AYUSH Hospitals/Dispensaries ☐ Provision & administration of public health services ☐ Nursing, Paramedical and Public Health Training Institutions, State University of Health Sciences ☐ Public Health Laboratories ☐ Drug Stores ☐ Ambulance providers ☐ NGOs/Private Hospitals
Other State Departments. Example: Tribal Welfare, Rural Development, Women & Child Welfare	☐ State Government ☐ Central Government ☐ External Aid ☐ Direct donor grants	☐ Hospitals ☐ Dispensaries ☐ Education and Training Institutions ☐ Medical Stores ☐ Provision & administration of public health services

Financing Agent	Sources of Funds	Major Providers
Local Bodies-PRIs/ Municipal Bodies	☐ Central Government ☐ State Government ☐ Local Government	☐ Clinics/Hospitals under local bodies ☐ Provision & administration of public health services
Social Insurance		
Employees State Insurance Scheme (ESIS)	☐ Employer Funds ☐ Employee Contributions ☐ State Government ☐ ESIC own resources	☐ ESI Dispensaries ☐ ESI Hospitals ☐ Administration/Health Insurance ☐ Private/NGO Hospitals, Diagnostic Centres
Central Government Health Scheme (CGHS)	☐ Central Government ☐ Employee Contributions	☐ CGHS Dispensaries and Hospitals ☐ Administration/Health Insurance ☐ Private/NGO Hospitals, Diagnostic Centres ☐ Administration/Health Insurance
Social Insurance Schemes of Other Central Government Ministries	Contributions from central government/ state government/ households Examples: ☐ Textile Ministry: Scheme for weavers ☐ Rural Development Ministry: Health Insurance for BPL ☐ Labour Ministry: Rashtriya Swasthya Bima ☐ Fisheries Department: Scheme for fishermen. ☐ Finance Ministry: UHIS	☐ Dispensaries and Hospitals maintained by central ministry and state departments of health and family welfare ☐ Private/NGO Hospitals and Diagnostic Centres ☐ Administration/Health Insurance

Financing Agent	Sources of Funds	Major Providers
Social Insurance Schemes of State Governments	State Government/ Household Examples: ☐ Aarogyasri -AP ☐ Yashaswini Scheme- Karnataka ☐ Chiranjeevi Scheme- Gujarat	☐ Public Hospitals ☐ Private/NGO Hospitals and Diagnostic Centres ☐ Administration/Health Insurance
Other Government Employees Insurance Schemes	Employer/Household Examples: ☐ Armed Forces Medical Services ☐ Indian Railway Medical Services ☐ Post & Telegraph Dispensary Scheme ☐ Contributory Health Services Scheme (CHSS) of the Department of Atomic Energy ☐ Ex-Servicemen Contributory Health Scheme ☐ Reimbursement Scheme as per Central Services (Medical Attendance) Rules ☐ Facilities/ Reimbursement Schemes of State Governments	☐ Dispensaries and Hospitals of various Central Ministries/State Departments ☐ Dispensaries and Hospitals maintained by central ministry and state departments of health and family welfare ☐ Administration/Health Insurance ☐ Private/NGO Hospitals and Diagnostic Centres

Private Sector

Major financing agents in the private sector are households, NGOs, firms and private voluntary insurance. The key private sector agencies in India, their source of funds and the major providers they fund are given in Table 6.2.

Table 6.2: Financing Agents in Private Sector: Source of Fund & Providers

Financing Agent	Sources of Funds	Major Providers
Households	☐ Households	☐ Public/Private/Non Profit Hospitals/Dispensaries ☐ Diagnostic Centres ☐ Retail Sale of Medical Goods and Pharmaceuticals ☐ Ambulance Providers ☐ Blood Banks
Private Voluntary Health Insurance	☐ Households	☐ Public/Private/Non Profit Hospitals/Dispensaries ☐ Diagnostic Centres ☐ Retail Sale of Medical Goods and Pharmaceuticals ☐ Ambulance Providers ☐ Blood Banks
NGOs	☐ Central Government ☐ State Government ☐ Rest of World ☐ Firms ☐ Households	☐ Non Profit Hospitals/ Dispensaries ☐ Ambulance services/Blood Banks in non profit sector ☐ Non Profit Training Institutions ☐ Non Profit Research Institutions ☐ Provision & administration of public health services ☐ Health Administration/Insurance
Firms	☐ Public and Private sector enterprises ☐ Households	☐ Employer owned facilities ☐ Public/Private/Non Profit Hospitals/Dispensaries

Investigating Data Sources

Having sketched the major actors in the health system and the next task is to identify appropriate data sources for health expenditure of each actor. A sound understanding of strengths and weaknesses of underlying data is fundamental to development of high quality health accounts. Strengths and weaknesses of data sources for key actors in the Indian health system is enumerated in Table 6.3 Efforts should be focussed on searching for, evaluating, and comparing sources of data to find those that best capture the transactions and flows of resources that occur in the health system. Broadly NHA uses two types of data- survey and non survey data. A brief discussion of key criteria in assessing quality of both these types of data are given below.

Assessing Quality of Survey Data

Survey data has an important role in building of health accounts. In India, they are the primary source of data on health expenditure by households, firms and NGOs. Number of aspects of any given survey should be evaluated before its results are used in the health accounts. Each has a bearing on the reliability, validity, and generalizability of the results. Key aspects identified by the Producers Guide include:

- Rationale for survey
- Sampling design and sampling error
- Non-sampling error
- Sample frame
- Detail and specificity of questions
- Mode of administration
- Feasibility of cross-checks
- Access to survey instruments and data sets
- Regularity of survey

Broadly, quality of a survey as a data source is dependent on three attributes- sampling error, non-sampling error, and sample frame bias.

Sampling errors arise from the fact that not all units of the targeted population are enumerated, but only a sample of them. Therefore, the information collected on the units in the sample may not perfectly reflect the information which could have been collected on the whole population. The difference is the sampling error. Given the uncertainty inherent in any sample survey, stating with absolute certainty the exact value of the concept being measured in the population is not possible. It is, however, possible to establish a range for that value and to associate some confidence with that range. The concept of sampling error

therefore leads to the notion of a "confidence interval" for the estimate— a range within which the statistician is " sure" the true population value lies. The confidence interval depends upon many factors, including sample size, how closely sample responses cluster, how confident the statistician wants to be, assumptions about the universe, and the type of the sampling. Confidence intervals can be constructed for any degree of confidence. Frequently, the 95% level is chosen, but this can be relaxed or tightened according to the consequences of errors for the estimate produced. Because the quality of a survey can in part be measured by the sampling error associated with its results, it is advisable to make explicit the magnitude of the margin of error so that those using the data to prepare the health accounts, and those using the health accounts themselves, can judge the values involved.

Non-sampling error is the error attributable to all sources other than sampling error. Non-sampling errors arise during the planning, implementation, data processing and estimation stages of all types of survey. Broadly non sampling errors can be classified into two categories- "not asking for what is wanted" and "not getting what was asked for". The case of "not asking for what is wanted" principally arises when survey respondents do not understand the survey questions whereas non-sampling errors grouped in the class of "not getting what was asked for" deal with the unwillingness or inability of respondents to reply accurately. An example of the latter is the "recall bias"- respondents cannot remember accurately how many events they experienced or when those events occurred. Some of the ways non sampling errors can be minimized include: careful design of survey questionnaire, field testing of tools and selection of appropriate respondents.

Sample frame bias refers to a systematic difference between the sample frame and the population of interest. A sampling frame is a body of information about the population being investigated which is used as the basis for selecting samples and in subsequent estimation procedures. When a sample is selected from a sampling frame not representative of the entire population of interest; then generalizing sample results to the total population is mis-representative. For example there are different types of NGOs in India. Some provide hospital services while others provide public health services, training or research services. Results of a survey based on a sampling frame where one or more of the above types are not included cannot generalized to the whole universe of health NGOs in India. Sample frame bias can be minimized by ensuring that the sample frame is representative of the universe.

Assessing Quality of Non-Survey Data

Non-survey data come from a wide variety of sources. Government budget data, government special reports, insurers' administrative data, trade association annual reports, academic research, business case studies, are all examples of this type of information. So too are qualitative research documents, focus group results, data from convenience samples and opportunistic data. The Producers

Guide lists a common set of questions that can be asked to assess the quality of these sources for a country health accounts.

- How complete is the base upon which the source is built? Greater inclusiveness is more likely to bring in better representation
- Does the data source or sponsor have an agenda to push? It is likely that biases of the sponsor or compiler of the data may be reflected in the data they provide. An understanding of such potential biases help in evaluating the quality of data
- What was the rigor in assembly of data? Quality of data is assessed by rigor in the data collection process and whether there is evidence of a critical review of results.

Table 6.3: Strengths and Weaknesses of Data Sources for NHA in India

Data Sources	Strengths	Weaknesses
A. Central Ministries and State Government Departments		
☐ Budget Documents ❍ Annual Financial Statement ❍ Revenue and Receipts Budget ❍ Expenditure budget ❍ Demand for Grants ☐ Annual Reports	☐ Most accessible of the different types of data ☐ Reliable and accurate ☐ Comprehensive coverage of the relevant activity ☐ Available on a regular basis ☐ Consistent reporting rules	☐ Data disaggregated into categories which may differ from the provider or function categories required for health accounts ☐ Barriers in getting data on military/ paramilitary health expenditure due to security practices ☐ Time lag in getting actual expenditure figures. Audited figures is published in the demand for grants after a year. For example accounts of 2003-04 is published in 2005-06

Data Sources	Strengths	Weaknesses
B. Local Bodies		
☐ Statistical Abstract ☐ State Level Consolidated Data ❍ Department of Municipal Administration/ Panchayti Raj and Rural Development ❍ Demand of Grants of Health Department in States where there is transfer of departmental funds to local bodies ❍ State Finance Commission Report ❍ State Fund Audit Report ☐ District/Regional Level Data ❍ Regional/District Audit Fund ❍ Income & Expenditure Statement of Municipal Bodies ❍ CEO Zilla Parishad: Income & Expenditure Statement ❍ District Panchayat Office ❍ Annual Administrative Reports of Panchayats ☐ Occasional Studies	☐ Post 72nd and 73rd constitutional amendments uniformity in structure of local bodies which make data comparable ☐ Consistent reporting rules	☐ Wide variation between States in health functions assigned to local bodies ☐ Data formats not consistent with NHA requirements ☐ Huge delays in consolidation of data at district and State level ☐ Audited accounts available after a considerable time lag

Data Sources	Strengths	Weaknesses
C. Societies: NRHM/SACS/RKS		
☐ Audited Accounts of State/District Societies ☐ Income & Expenditure Statements ☐ NRHM/NACP MIS ☐ Periodical Reports ☐ District Administration/ PMU	☐ Accessible ☐ Comprehensive coverage of the relevant activity ☐ Available on a regular basis ☐ Consistent reporting rules	☐ Data not available in format required for NHA ☐ Expenditure is recorded at State level once allocation is made to districts, whether funds are spent by district units or not.
D. Employees State Insurance Scheme		
☐ ESIC Annual Reports ☐ ESIC Regional ☐ State Insurance Medical Services ☐ Demand for Grants of Department of Labour	☐ Accessible ☐ Reliable and accurate ☐ Comprehensive coverage of the relevant activity ☐ Available on a regular basis ☐ Consistent reporting rules	☐ Since health benefits are provided along with other social security benefits, estimation of actual contribution of different sources of funds is difficult ☐ Need to pool information from both ESIC and State government to get total expenditure data
E. Central Government Health Scheme		
☐ CGHS central/ regional offices ☐ CGHS Annual Report ☐ Demand for Grants of MoHFW	☐ Accessible ☐ Reliable and accurate ☐ Available on a regular basis ☐ Consistent reporting rules	☐ Data available in format different from that required by NHA ☐ Includes beneficiaries other than central government employees

Data Sources	Strengths	Weaknesses
F. Social Insurance Schemes of State Governments/ Central Ministries		
☐ Various State departments and ministries ☐ Autonomous Bodies/ TPAs set up to administer insurance	☐ Restricted to medical care and related expenditures ☐ Available on a regular basis	☐ Wide variation in insurance models and reporting formats ☐ Cost of administration at government level difficult to separate from general administration costs ☐ Need for pooling of State level data
Other Government Employees Insurance Schemes		
☐ State and Central Demand for Grants ☐ Administrative Offices of Schemes ☐ Pay and Accounts Office ☐ Directorate of Treasuries	☐ Restricted to medical care and related expenditures ☐ Reliable and accurate	☐ Need for pooling of data at different levels ☐ May be difficult to separate health expenditure from other allowances of employees
G. Private Voluntary Health Insurance		
☐ Insurance Companies ☐ Annual Reports of IRDA ☐ Occasional Studies	☐ Restricted to medical care and related expenditures ☐ Available on a regular basis	☐ Frequently weak on functional detail ☐ Absence of centralized information system ☐ Unwillingness to share proprietary data ☐ Difficulty in keeping track of all organizations in a rapidly changing market

Data Sources	Strengths	Weaknesses
H. Household Health Expenditure		
☐ NSSO Special Rounds on Health ☐ NSSO Annual Surveys on Household Consumption Expenditure ☐ National Family Health Surveys ☐ RGI Population Projections ☐ Occasional Surveys	☐ Only source of information on private providers ☐ Cross-classification with relevant demographic, economic, social and other payer and user characteristics	☐ Data availability periodical ☐ Time lag before survey results become available ☐ Differentiation between different types of providers generally not available ☐ Recall bias and other non sampling/ sampling errors
I. Public/ Private Sector Firms		
☐ Public Sector ❍ Public Enterprises Survey on central PSEs ❍ State Departments of Public Enterprises ❍ Statistical Abstract ❍ Economic Survey ❍ Occasional Surveys ☐ Private Sector ❍ Confederation of Industry ❍ Quarterly Employment Review ❍ Statistical Abstract ❍ ESIC ❍ Insurance Companies ❍ Occasional Surveys	☐ Data on persons employed in various sectors available ☐ Representative sampling frame for large and medium scale industries ☐ Reliable data on social insurance contributions	☐ Private sector is diverse with variety of financing mechanisms for health care of employees ☐ Lack of detailed cost data ☐ Other than occasional small scale surveys no reliable data on financing mechanisms other than social insurance.

Data Sources	Strengths	Weaknesses
J. Non Profit Institutions/ NGOs		
☐ Demand for Grants of Central Ministries/ State Departments for grant in aid data ☐ Ministries/ Departments/ Societies for data on contractual engagement of NGOs ☐ Annual Report, Receipt of Foreign Contribution by Voluntary Associations" of FCRA, Ministry of Home Affairs ☐ Charity Commissioner and Registrar of Societies ☐ NSSO data on household health expenditure ☐ Occasional Surveys	☐ Mandatory mechanism for reporting foreign funds ☐ Legal requirements for submitting audited accounts/ annual reports to concerned State authorities	☐ Many NGOs engaged in multiple sectors. Separating health expenditure is often difficult. ☐ NGO sector is extremely diverse with variety of financing mechanisms ☐ All external funds not captured by FCRA. Funds from many multilateral and other specified agencies exempt from FCRA ☐ Lack of a representative sampling frame ☐ Difficult to differentiate the amounts provided to NGOs by government agencies as they are included under various heads of account ☐ Delayed or Non Submission of annual reports/ accounts ☐ Difficulty in differentiating between NGO and private sector by respondents in household surveys

Developing a Data Plan

Having identified the data sources and made an assessment of their quality, the next step is to collect data. The Producers Guide highlights the following goals for data collection in health accounts.

- Using all suitable existing data;
- Adjusting existing data to bring them closer to suitability;
- Improving or enriching surveys and records with a potential for suitability;
- Arranging for collection or generation of " missing" data.

The data plan answers the what, who, when and where of data collection. Key steps in developing a data plan is discussed below.

1. The first step is to identify what information will be collected for the NHA on each of the health system actors. The type of data required will depend upon:
    - Definitions and boundaries of national health expenditure agreed upon by the key stakeholders,
    - Policy issues being addressed by NHA,
    - Level of detail desired,
    - Time availability; and
    - Resource Availability
2. Having determined what data is to be collected, the next step is to decide who will be responsible for collecting which type of data
3. Determine when will the data be collected and what is the deadline for obtaining the data
4. Finally, decide from where the data should be collected. The key is to collect as much data as possible from secondary sources. The collective knowledge and influence of the steering committee should be leveraged to identify secondary data sources and facilitate access to such data.

Creating a Health Accounts Database

As the data gets collected the next step is to place available data in a spreadsheet or a database package. The organization of the database should be constructed bearing in mind the nature of the health system and the availability of information. Depending on the approach chosen, the data recorded at the start will be related to financing agents or to providers. At the initial stage, the recording will consist of simply placing the figures taken from the relevant data sources into a spreadsheet or a database package. Once data start appearing in the spreadsheets and databases the next step will be to aggregate the information into

the basic NHA tables. At this stage, health accountants may encounter a number of issues related to data that needs to be resolved. The next section deals with the common issues encountered and how they can be resolved.

Resolving Issues Related to Data

Commonly encountered issues related to data and suggestions to resolve them are given below.

Limitations of Available Data:

This includes a number of issues such as insufficient functional information, lack of cross classification, lack of representativeness of data and data source conflict. For example: budget data may not clearly differentiate between expenditure by medical colleges on medical education and curative care; household surveys may provide total out of pocket expenditure data but not be able to differentiate between various type of providers; or expenditure figures is available for the country/region as a whole and cannot be differentiated by States. Such issues can be addressed by:

- **Seeking New Information:** Discussing the availability of more data with various experts in the light of the identified issues may throw light on new information sources. For example: discussing the difficulty in differentiating expenditure of medical colleges between curative care and education with those responsible for reporting and compiling this information may highlight sources of information which might be combined with estimation methods to resolve the problem.
- **Use of Assumptions:** Even after searching for other data sources, in some cases there will still not be sufficient information to estimate a component of the Health Accounts and it will be necessary to resort to estimation methods using other information available. One such method is making assumptions regarding distribution of expenditure based on distribution of a proxy variable. For example, data pertaining to administrative costs on health care financed by schemes providing multiple social security benefits is usually hard to get as the available data includes cost of administration of health and other benefits. Here, it may be reasonable to assume that the ratio of expenditure on health benefits and other benefits is the same as the ratio of their respective administration costs. To illustrate: if the ratio of expenditure on health benefits and other benefits is 20:80; 20% of the administrative costs would be allocated to health expenditure. Whenever such assumptions are made, they should be justified and well documented.

Data Sources Conflict:

In some instances there are more than one source of data and they may disagree on the value of the parameter being estimated. For example: a survey of NGOs

may provide an estimate of external funding different from that reported by the Ministry of Home Affairs or a household survey may provide an estimate of spending on charitable hospitals different from that reported by an NGO survey. While having more than one data source is useful, the issue is in deciding which data source is likely to be better than the others. Consideration of the following methods will be useful in choosing between multiple data sources.

- Compare methodology used by each source. Assess which methodology is more rigorous and is more likely to capture the true nature of transactions involved.
- Check if all the sources uses the same time period, monetary measures and accounting basis- accrual or cash
- Seek guidance of experts
- If two expenditure estimates differ by less than 2% of total health expenditure, it is better to choose the more conservative estimate rather than spend time and resources in resolving the difference

Data Sources Do Not Exist:

For example in India, currently there is no reliable data source for expenditure of firms on its own health facilities. In such cases the only solution is to collect new data. It may be necessary to advocate for major surveys such as household surveys to be done by professional agencies. In other instances, minor surveys of small sample size such as firms or NGOs can be carried out by the NHA team.

Filling in the NHA Tables

The data collected is used to populate the NHA tables. Here it is reiterated that the process of filling of tables is an iterative one; with gaps and problem areas that arise in the process being resolved by searching for new data sources, reconciling and making suitable estimations where necessary. Prompt documentation of all decisions regarding data source and estimation methods used is key to quality control and facilitation of future health accounts cycles. Internationally, a set of nine tables are used to illustrate flow of funds between principal health care entities. However, this chapter deals only with the core set of three NHA tables currently adopted by Government of India, listed in Chapter 2. Before going into details of filling of tables it would be useful to familiarize participants with the structure of NHA tables.

Basic Structure of NHA Tables

Each NHA table is a two dimensional table showing the flow of funds from one category of health care entity to another. Within the basic NHA tables, the funds are shown to flow downward from the sources to financing agents and from financing agents to uses/users. The total amount spent by each source is shown at

the bottom of each column and the total amount received by each user is shown at the end of each row. NHA tables are also linked to each other as they trace the flow of funds from source to financing agents to providers and functions. As is seen in Figure 6.2 the row headings of one table become column heading of the next table and the row totals of the first table become the column totals of the second table.

Figure 6.2 : Flow of Funds in NHA Tables

ICHA Code	Financing Agents (HF)	Financing Sources (FS)			Total (Rs. Million)
		FS 1.1.1 Central Government	FS 1.1.2 State Government	FS 3 External Aid	
HF 1.1.1.1	MoHFW	14,247		9,900	24,147
HF 1.1.2.1	State Department of Health	23,696	104,111	9,799	137,606
HF2.4	NGOs	602	984	5,148	6,734
NHE	Total Expenditure (Rs.Million)	38,545	105,095	24,847	168,487

ICHA Code	Providers (HP)	Financing Agents (HF)			Total (Rs. Million)
		HF 1.1.1.1 MoHFW	HF 1.1.2.1 State Department of Health	HF2.4 NGOs	
HP.1	Hospitals	4,234	41,232	3,291	48,757
HP.3	Providers of Ambulatory Health Care	1,212	9,256	1,019	11,487
HP.5	Provision of Public Health Programs	18,701	87,118	2,424	108,243
NHE	Total Expenditure (Rs.Million)	24,147	137,606	6,734	168,487

Source: Adapted from PHR Plus (2003)

Steps in Filling NHA Tables

It is generally advisable to begin with Financing Agents as they:

- are in the middle and it is easier to go forward from this point to estimate uses as well as go backwards to estimate financing sources
- are relatively few in number compared to providers
- have programmatic control of funds and are readily identifiable as paying for health care goods and services
- generate comparatively more reliable data

FS X HF Table

1. List and classify all potential Financing Agents in the first column
2. Divide expenditure related to Financing Agents into three, where applicable:
    - Funds which are used to operate a health program or a provider are demarcated as funds allocated for a function or provider. For example funds used by MOHFW in operating hospitals under the ministry.
    - Funds transferred to an entity which actually pays for the health service or goods. For example: funds transferred from MOHFW to CGHS or State Departments of Health. In this case MOHFW is only a conduit for funds and not a Financing Agent. Hence these funds are not shown as funds of MoHFW, but captured as funds received by the actual financing agents- State Departments of Health and CGHS from financing sources.
    - Spending of Financing Agents which are not used for health care. For example the Employees State Insurance Scheme (ESIS) spends on other social security benefits other than health. The expenditure of ESIS on non health services are excluded from the health accounts.
3. Make first approximation of Financing Agent Expenditure
    - Start with central government units such as MOHFW, as expenditure data is more easily available
    - Using ministry or agency records, the amounts for each financing agent are summed, keeping separate track of the money they spend on health care and the money they transfer to others to spend on health care.
    - Identify various financing sources for each financing agent and list them in the first row.
    - Use T- Accounts for each fund of the financing agent. T- Account is a simple tool which provides a structure that not only encourages careful thinking about decisions but also helps maintain the equality of the row and column sums of the tables to be developed. In the T-account expenditures are listed on the left side of the account, and revenues on the right side of the account. The cardinal rule of T-accounts is that the sum of entries on the left and right sides must always be equal. In other words total revenues must equal total expenditure or retained revenue.
    - Start filling cells in the FS X HF Matrix

Table 6.4 : Example of a T- Account: MOHFW Spending

Expenditure (Rs. Million)		Receipts (Rs. Million)	
Revenue Expenditure	21,395	Central Government	14,729
Capital Expenditure	3234	External Aid	9,900
Total	24,629	Total	24,629

Filling the HF X HP and HF X HC Tables

In the previous section we have traced backwards the source of funds for each financing agent. Here we trace forward allocation of financing agent funds to providers and functions. Since the same funds are used to make allocations to both functions and providers, mostly using the same data source, it is useful to start filling the HF X HP and HF X HC tables simultaneously. In some cases data may provide either function or provider information only. It is advantageous to attempt filling both tables simultaneously as information on function can sometimes provide insights to the type of provider and vice versa. For example: budget data may indicate allocation to a public health programme without specifying a provider. Since no provider is specified, the funds can be allocated to HP 5 Provision and Administration of Public Health Programs.

1. Enter the financing agents in the first row
2. Identify all potential providers and functions and list them in the first column of respective tables
3. Classify providers and functions with appropriate ICHA codes
4. Create additional provider rows if new providers are identified
5. Enter expenditure estimates in the table. Begin by taking the row totals from FS X HF table and place them as “trial sum” column totals in the HF X HP and HF X HC tables
6. From financing agent records, enter the disaggregated estimates in the corresponding provider/function line.
7. If there is no direct information on break up of financing agent expenditure, additional information may need to be collected or other estimation methods based on informed assumptions may be used. If it is still not possible to break the expenditure down, the expenditure can be placed in the “n.s.k” category till such time better information becomes available. All attempts should be made to keep the n.s.k category as low as possible.
8. The next step is to compare the independent estimate of provider/function spending with the trial sum obtained from summing the spending of financing agents. If they match, then the table is complete. Invariably they

will not match, requiring rechecking of data sources and reexamination of the estimates. Issues that commonly arise in the process of filling these tables and ways to resolve them will be dealt in greater detail while working out the case studies

References

1. Guide to producing national health accounts, with special applications for low-income and middle-income countries, World Health Organization, 2003. Chapter-5-13
2. National Health Accounts Training Manual, PHR Plus, 2003. Unit 2, 5 and 6
3. SHA Guidelines: Practical guidance for implementing A System of Health Accounts in the EU (2004) produced by the Office for National Statistics (UK) - Chapter 4 and 5

Chapter Six Exercises

Ask the participants to imagine that they are preparing State Health Accounts for the State where they are currently working and answer the following questions

Question One:

A steering committee has to be set up for the State Health Accounts project. Who all do you think must be members of the committee

Members of Steering Committee for NHA: State of _____
1.
2.
3.
4.
5.
6.
7.
8.
9.
10.
11.
12.
13.
14.
15.
16.
17.

Question Two:

Identify data sources for State Health Accounts in the State

Entities	Data Sources
State Department of Health	
Other State Departments	
Ministry of Health and Family Welfare	
Other Central Ministries	
ESIS	

Entities	Data Sources
Other Social Security Schemes	
Government Employee Insurance Schemes- Central/State/Local	
Other Social Insurance	
Private Voluntary Health Insurance	
Panchayati Raj Institutions	

Entities	Data Sources
Municipal Bodies	
NGOs	
Household Health Expenditure	
Public Sector Firms	

Entities	Data Sources
Private Sector Firms	

Chapter Seven
Government Health Expenditure

Learning Objectives

- To identify government entities that incur health expenditure
- To understand the mechanisms of financing Central, State and Local Government health expenditure
- To familiarize participants with Central, State and Local Government health expenditure data and their sources

Unit Outline

- Budgetary Mechanisms of financing Central and State Government health expenditure
- Extra-Budgetary Mechanisms of financing Government health expenditure at State and district level and data sources
- Budget Documents and their utilization in compilation of health accounts
- Transforming Budget Data into NHA Classes
- Health Expenditure of Local Governments

Time Requirements

- In Session
  - Presentation: 120 minutes
  - Exercises: 60 minutes

Central & State Government Health Expenditure

Overview

Central Government Expenditure on Health is through budgetary allocation by Government of India to Ministry of Health and Family Welfare (MoHFW) and other Central ministries and divisions. MoHFW is an important financing agent which finances providers under the ministry; provides grants to state government for centrally sponsored programs; grants to autonomous bodies, NGOs and other providers; and finances social health insurance such as the Central Government Health Scheme (CGHS). All central government ministries incur expenditure on health care provided to their employees and dependents not covered under the CGHS. This may be for direct provision of services (examples: Ministries of Defense and Railways); for social insurance schemes (examples: P&T Dispensaries Schemes and Contributory Health Services Scheme (CHSS) of the Department of Atomic Energy) or for reimbursement of medical expenses of employees and their dependents by parent departments as per Central Services (Medical Attendance) Rules, 1944. In addition some ministries such as women and child development and science and technology also incur health expenditure.

At the State level, Departments of Health are the major financing agents through which allocations are made to various public, nonprofit and private providers. In some states like Andhra Pradesh there is a single Department of Health and Family Welfare which comprise of different functional sub-departments for primary care, family welfare, secondary care, tertiary care, medical education, drug control administration etc. In other states like Madhya Pradesh there are separate departments for public health and family welfare; medical education and AYUSH. Other departments also play a significant role in health care at State level. These include departments for Labor (ESIS), Tribal Welfare (tribal health services), Women and Child Welfare (ICDS). As in the case of central ministries, state departments also spend on health care of their employees and dependents. While departments like Home, Transport, Electricity etc., have their own facilities in some states, others reimburse expenditure on health care.

Sources of Funds

Sources of funds of central ministries/state departments include:

- Budgetary support by the Government of India/State government
- Loans raised by government from public, RBI, financial agencies and foreign governments
- Grants from Central Ministries (in case of State Departments)
- Grants from foreign governments and agencies

- Public Receipts which includes fees, fines, receipts/contributions for social health insurance and other receipts

All loans raised by Central and State governments including that from international financial agencies and governments are considered as funds of the respective governments [FS.1.1.1 (central government) or FS.1.1.2 (state government)]. Grants from international agencies and foreign governments are considered as External Assistance or Rest of the World fund (FS.3). Public Receipts are contributed by various sources. They include: household payments (FS.2.2) as fees and contributions to social insurance. Fees are collected from the households by two mechanisms. To retain funds for use at points of generation Rogi Kalyan Samithis, Hospital Development Societies and other such autonomous bodies have been created. Fees collected by these bodies are not reflected in the budget and form part of the extra-budgetary resources available to the government. In the second case the government facilities collect the fees for a variety of services (See Table 6.1) and the same is deposited into the "Consolidated Fund" of respective governments and are not available to the facility which generates it. Similarly, household contribution to CGHS and reimbursement from ESIC to the State government is also credited to the "Consolidated Fund". Payments to the Consolidated Fund is reflected in the receipt budgets of the respective governments. Since these receipts have accrued to the government for provision of health care services, they are deducted from the budgetary contribution of respective governments and shown as contributions from sources which generated the funds.

Extra-Budgetary Health Expenditure at the State Level

These are expenditures that would ordinarily be classified as being under Department of Health and Family Welfare auspices, were it not for the fact that the funds supporting such expenditures are directly provided to the concerned implementing agencies in a form that leads to their being excluded in the accounting under the State government Demand for Grants. They include expenditures by "Societies" such as the State AIDS Control Society (SACS) and the NRHM Society for Health and Family Welfare. Similar societies existed for tuberculosis, leprosy, malaria and blindness. However they have now been merged and brought under the NRHM society. Because of the way these non-profit organizations are registered, most funds received by them are not recorded under the demand for grants. Indeed the purpose of these societies appears primarily to serve as a conduit for an easy transfer of new funds directly to entities related to vertical programs. The societies are primarily funded by GOI. A second category of expenditures that goes unrecorded in the state budget is that of Hospital Development Societies or Rogi Kalyan Samithis (RKS). These are the registered societies constituted in the hospitals as a mechanism to involve the peoples representatives in the management of the hospital. The functioning of these bodies are supported by untied funds under NRHM, user charge revenues and/or stoppages.

Table 6.1: List of Major/Sub Major Budget Heads in Receipt Budget

Major/Sub Major Head		Minor Heads	
210	Medical and Public Health		
	01 Urban Health Services	20	Receipts from Patients for hospital and dispensary services
		101	Receipts from Employees State Insurance Scheme
		103	Contribution for Central Government Health Scheme
		104	Medical Store Depots
		107	Receipts from Drug Manufacture
		800	Other Receipts
	02 Rural Health Services	101	Receipts/contributions from patients and others
		800	Other Receipts
	03 Medical Education, Training and Research	101	Ayurveda
		102	Homeopathy
		103	Unani
		104	Siddha
		105	Allopathy
		200	Other Systems
	04 Public Health	102	Sale of Sera/Vaccine
		104	Fees and Fines etc.
		105	Receipts from Public Health Laboratories
		501	Services and Service Fees
		800	Other Receipts
	80 General	101	Fees for issue of Certificates under WHO-GMP Scheme
		800	Other Receipts
211	Family Welfare	101	Sale of contraceptives
		800	Other Receipts

An illustration of flow of funds from various sources to financing agents under government of Madhya Pradesh is given in table 6.2

Table 6.2: Financing of Health Expenditure of Government of Madhya Pradesh (2005-06) FS X HF

Financing Agents	Sources of Funds (Rs. Crore)						
	FS.1.1.1 Central Govt	FS.1.1.2 State Government		FS.2.1 Employer	FS 2.2 Households	FS.3 Rest of the World	Total
		GoMP	Loans				
HF 1.1.2.1 State Departments of Health							
PH&FW	267.13	451.6	26.6			71.73	817.06
Medical Education	0.33	197.58					197.92
Societies	67.2				9.18		76.38
Total HF 1.1.2.1	334.66	649.18	26.6	0	9.18	71.73	1091.36
HF 1.1.2.2 Other State Departments							
Bhopal Gas Tragedy Relief & Rehabilitation		20.48					20.48
Public Health Engineering		2.76					2.76
Women & Child Welfare	212.12						212.12
Total HF 1.1.2.1.2	212.12	23.24					235.36
HF 1.2.2 ESIC	1.06	14.73		12.23	4.51		32.53
Grand Total	**547.84**	**687.15**	**26.6**	**12.23**	**13.69**	**71.73**	**1359.2**
Source: Demand for Grants and Receipts of Societies, GoMP							

Utilization of Budget Documents in Compilation of Health Accounts

Article 112 of the Constitution stipulate placing of the Annual Financial Statement, commonly known as Budget, of the Union before the Parliament. Similarly Article 202 of the Constitution stipulates placing of Annual Financial Statement of a State before the State Legislature. Form in which accounts of the Union and States are to be maintained is governed by Government Accounting Rules, 1990.

Basic Structure of the Budget (Parts of the Budget)

The basic structure of Government budget both at the Centre and at the State level is classified into three parts:

- Part I: Consolidated Fund: All tax and non tax receipts including loans raised by Government, loans or ways and means advances and all money received by Government in repayment of loans are credited to this account. All expenditure of the Government is incurred from the consolidated fund.
- Part II: Contingency Fund : This fund is meant to meet urgent unforeseen expenditure pending authorization from Parliament/Legislature. The withdrawals from the Contingency Fund are replenished with an equal amount from the Consolidated Fund by presenting Supplementary or Excess Demands, as required, by the Parliament/State Legislature
- Part III: Public Account: This account relates to those funds where the government acts as a banker to the public. The government accepts deposits from the public under various schemes such as provident funds, small saving collections, other deposits etc., and pays interest on such deposits. The receipts under this account constitute the liabilities of the government and have to be paid back to the persons and authorities who deposited them. Authorization of Parliament/ Legislature for payments from the Public Account is, therefore, not required.

At the Government of India level, the Railway budget is separated from the General Budget with the objective of providing stability to General Finances and to provide flexibility of administration to railways. Similarly for the sake of practical convenience Departments of Posts, Telecommunications and Defence are permitted to determine their form of accounts.

Budget Documents

The main budget document is the Annual Financial Statement. It consists of an introductory note bringing out the overall financial position along with the salient aspects of budget dealing with i) Actuals of the earlier year ii) Budget estimates of the current year iii) Revised estimates of the current year and iv) Budget estimates presented for the year that follows. The main part of the Annual Financial Statement is the statement showing major head-wise figures of (i) to (iv) mentioned above. The Statement also includes the schedule of appropriations proposed for the year, which is placed before the Parliament/ Legislature for approval in the Budget session. It also includes a note on the procedure of presenting Gross Demands to the vote of the Parliament/ Legislature. A number of documents which are subordinate to the Annual Financial Statement including explanatory documents to facilitate easy comprehension of the budget are presented along with the budget. For health accounts the following budget documents are crucial:

Demand for Grants of Ministries/Departments

These are laid on the table of Parliament/Assembly by concerned Ministries/Departments after the presentation of budget. It shows gross estimates of expenditure relating to each programme/organization. Each demand shows

expenditure between plan and non-plan and expenditure under revenue and capital sections separately. Expenditure is shown up to object head level.

Receipt Budget

This document further analyses the estimates of receipts given in the Annual Financial Statement and gives details of tax and non-tax revenue receipts and capital receipts and explains the estimates.

Classification of Budget Expenditure

The basic categorization of public expenditure is non-plan and plan. Non-plan expenditure reflects expenditure of the government on maintaining the current level of services. In other words, it reflects the recurring expenses of the government. On the other hand, plan expenditure of the government refers to the expenses incurred by the government towards the projects that are planned as part of the Five-Year Plans. This may include both capital and recurring expenditure.

The Expenditure is either 'Charged' or 'Voted'. 'Charged' expenditure as defined in the Constitution is that which is charged on the Consolidated Fund and is not subject to the vote of the Legislature. Under the Constitution certain items of expenditure like emoluments of President, Chairman of Rajya Sabha, Speaker of Lok Sabha, Judges of the Supreme Court, CAG and CVC; interest on repayment of loans raised by the Government. and payments made to satisfy decrees of Courts etc are charged on the Consolidated Fund and are not required to be voted by the Legislature. Such expenditure are shown separately in the budget documents. This expenditure can, however, be discussed in the Legislature. All other expenditure is subject to the vote of the Legislature. Most of health and related expenditure are “voted” in nature.

The expenditure section comprises of

- Revenue Expenditure- The expenditure on current consumption of goods and services of the departments of Government on activities of non-capital character are booked as revenue expenditure.
- Capital Expenditure - This is the expenditure incurred by Government with the object of either acquiring or creating assets of a material and permanent character or with a view to reducing recurring liabilities. Examples are acquisition of land, construction of buildings, roads and bridges, irrigation and power projects, purchase of equipment and machinery, investments in share capital etc.
- Expenditure under Debt Heads (Loans and Advances) - This section includes provisions on account of repayment of Central and other loans, repayment of ways and means advances, market loans etc. It also includes provisions made for loans and advances paid by the Government for various purposes

Accounting Structure

Article 150 of the Constitution provides that the accounts of the Union and State Governments need to be kept in such form as the Comptroller and Auditor General of India (CAG) may with the approval of the President prescribe. Transactions in the budget documents are grouped into sectors such as general services, social and community services, economic services etc. Each sector is divided into sub sectors. For example health services fall under social and community services sector. Sub sectors under which health services are provided includes: Health and Family Welfare; Labour and Labour Welfare; Welfare of Scheduled Castes, Scheduled Tribes and Backward Castes; Social Welfare and Nutrition . Below the sub sectors a six tier coded classification is followed. This includes major / sub-major heads of account, minor heads, sub-heads and detailed heads. The sectors, sub-sectors, major and sub-major heads and minor heads have been prescribed by the CAG and are required to be uniformly adopted by the Union Government and all the State Governments. Below the minor heads are subheads, which can be opened by the State Governments at their own discretion and according to the needs.

Major Head is the main unit of classification in Government accounts and corresponds to the function of the Government. In the Annual Financial Statement and the Demand for Grants transactions are recorded according to the major head. In the department-wise detailed demands for grants the transactions are recorded under each section, viz. Revenue, Capital and Debt Heads as per the six tier of classification as shown below.

Table 6.3 Budget Heads with Examples

Budget Heads	Denotation	Example
Major Head	Function	2210 Medical and Public Health
Sub-Major Head	Sub-Function	01 Urban Health Services - Allopathy
Minor Head	Program	110 Hospitals and Dispensaries
Scheme/Group Head	Plan Scheme	10 Centrally Sponsored Scheme
Sub Head	Sub-Scheme	05 District Headquarters Hospitals
Detailed Head	Objects of Expenditure	01 Salaries

Codification of Heads of Account

Currently a four digit code has been assigned to the major head in such a way that the last three digits represent the same function in revenue receipts, revenue expenditure, capital expenditure and loans and advances sections as shown

below. Prefix 2, 4 and 6 has been added to the 3 digits to denote revenue expenditure, capital expenditure and loans and advances respectively.

Table 6.4: Major Head Codes for Receipts and Expenditure Heads

Function	Major Head Code			
	Revenue Receipts	Revenue Expenditure	Capital Expenditure	Loans and Advances
Medical and Public Health	210	2210	4210	6210
Family Welfare	211	2211	4211	6211

Transforming Budget Data into NHA Classes

As is seen earlier budget data is provided under heads that is different from NHA Categories. However much of the budget data can be converted into NHA Categories fairly easily. A good understanding of the public health system and some key informant interviews can further help. Analysis of the detailed demand for grants of each relevant department at the sub head level in conjunction with the superior heads is required to assign expenditure data to respective source, provider and function categories. Analysis at detailed head level is required for classification according to Resource Costs. Steps to be taken to transform budget data into NHA Classes is outlined below. A worked out example is given in Table 6.5

Transforming Budget Data into NHA Classes: Suggested Steps

1. Identify Departments which incur health expenditure
2. Select the demand for grants of concerned departments which has actual expenditure figures for the NHA base year (Usually the demand for grants 2 years following the NHA base year i.e., if the base year is 2005-06, actual expenditure figures for the same will be available in the demand for grants of the department for the year 2007-08)
3. Identify Major Heads under which health expenditure is recorded (For example 2210, 2211, 4210, 4211)
4. Select Major Head and enter expenditure figures up to Sub Head Level as shown in Table 6.8 in a spread sheet
5. Enter appropriate NHA codes in columns specified for Source, Provider and Function
6. At the state level, sources indicated in the demand for grants include state government, central government and external aid. Central government and

external aid contribution is usually in the Plan Budget. These are identifiable at the Scheme/Group level. Some central government grants such as Finance Commission awards are reflected as non plan grants.

7. In initial round of analysis the names of subheads may not contain necessary information to enable allocation of expenditure to provider and function categories. This is particularly so because sub-heads are created at the State level and is not uniform across States. In such cases expenditure under these heads may be included under the " nsk" categories. Subsequent interactions with key informants in the concerned departments should enable identification of appropriate categories and minimizing the number of "nsk" entries.

8. To generate estimates in each class across department the following steps are suggested:

   - ☐ Enter all classes of expenditure under each category (source, provider, function) in separate tables with appropriate codes
   - ☐ In the column adjacent to the code where the expenditure amount is to be estimated insert sum if function
   - ☐ In the function arguments enter the range of cells which is to be evaluated. For example if the table is for estimating contribution of various sources, enter the range of the column under sources.
   - ☐ Enter Criteria in the form of a number, expression, or text that defines which cells will be added. For example if the selected cell is adjacent to code for Central government source, enter the same code that was used for data entry
   - ☐ Click OK to generate total contribution by central government to the department
   - ☐ Similarly estimates for all categories and classes can be made

Table 6.5: Classification of Sub Heads According to NHA Classes: Examples from Plan Budget of Department of Health & family Welfare, Government of Andhra Pradesh

Major Head	Sub-Major Head	Minor Head	Scheme	SubHead	Source	Provider	Function
2210-Medical and Public Health	06 - Public Health	001 - Direction and Administration	11 - State Plan	01 - Headquarters Office	FS 1.1.2	HP 6.2	HC.7.7
				04 -Implementation of Smoking Act	FS 1.1.2	HP 5	HC 6.4
		003 - Training	11 - State Plan	04 - Training of Health Staff	FS 1.1.2	HP 8.1	HC R2
		101 - Prevention and Control of Diseases	03-External Aid	37-Assistance to APSACS	FS.3	HP 5	HC. 6.3
			10 - CSS	05 - National Leprosy Eradication Programme	FS.1.1.1	HP 5	HC. 6.3
				06 - National Malaria Eradication Programme - Urban and Rural	FS.1.1.1	HP 5	HC 6.3
				07 - National Filaria Control Programme	FS.1.1.1	HP 5	HC. 6.3
2225 - Welfare of SCs, STs and BCs	02 - Welfare of Scheduled Tribes	282 - Health	11 - State Plan	07 Hospitals under Directorate of Health	FS 1.1.2	HP 1.1.2	HC.1.
4210 - Capital Outlay on Medical and Public Health	80 - General	789 - Special Component Plan for Scheduled Castes	05 - PMGY	04 - Construction of Medical Buildings	FS.1.1.1	HP 1.1.2	HC.R.1
		796 - Tribal Area Sub-Plan	05 - PMGY	04 - Construction of Medical Buildings	FS.1.1.1	HP 1.1.2	HCR.1

Health Expenditure of Local Governments

Forms of Local Government

According to the Indian Constitution, “local government” is a State subject and until 1993 each State was empowered to create its own structure of local government and decide upon the responsibilities of the latter. The 73rd and 74th Amendment Act of the Constitution has granted constitutional status to local governments and has brought a semblance of uniformity among States as far as the structure and composition of local governments are concerned. There are two forms of Local Government in India- the urban Municipal Bodies and the rural Panchayati Raj Institutions.

According to the 74th Constitutional Amendment the Urban Local Government has been classified into three types. These are Municipal Corporations in larger urban areas, Municipal Councils in urban settlements, and Nagar Panchayats in 'transitional' areas, which are neither fully urban nor fully rural. Similarly the 73rd Amendment provides for an uniform system of three tier Panchayats at the village (Gram Panchayat), intermediate (Block Panchayat) and district (Zilla Parishad) levels.

Health Care Functions of Local Governments

The 73rd and 74th Amendment Acts have reiterated the existing provision that a State government is empowered to endow its local governments with such powers, functions and responsibilities as are considered necessary to make the latter, the units of local self-government. The Eleventh Schedule of the Constitution, lists 29 subjects and the State governments were given the discretionary power to transfer any specific power, function and responsibilities pertaining to these subjects to the PRIs. Similarly the Twelfth Schedule lists 18 subjects pertaining to urban local governments.

The functions of local governments fall in two groups-obligatory and discretionary. Obligatory functions are those which all Local Governments are obliged to undertake. Public health including prevention of communicable diseases is an obligatory function of local governments. Discretionary or permissive functions are those which the local governments may undertake at their convenience depending on devolution of such functions by the State government along with funds and functionaries to perform them. The devolution of these functions, functionaries and funds varies from State to State. Certain States such as Kerala, West Bengal, Karnataka and Maharashtra have a comparatively better track record in devolution of health functions such as family welfare and maintenance of dispensaries, primary health centres and hospitals. While many other States have devolved such functions they are yet to be accompanied by devolution of funds and functionaries.

Fiscal Characteristics of Local Bodies

The Constitution of India provides the mechanism for allocation of resources between Central and State governments. Article 280 of the Constitution of India provides for the constitution of a Central "Finance Commission" to recommend the distribution of central taxes between the Union government and the States. While the financial relationship between the Central and State governments have been clearly specified by the Constitution, there is no such clear cut demarcation in the case of State and local body financial relationship. The 73rd and 74th Amendments have made some provisions for review of financial position of local bodies and augmentation of State resources to supplement their finances. The amendments provide for the constitution of an independent State Finance Commission in each State. The State Finance Commissions (SFC) are required to review the financial position of the local bodies and to recommend devolution of funds from the State government. Following the Amendment of Article 280 of the Constitution, the Central Finance Commission is required to recommend measures needed to augment the Consolidated Fund of a State to supplement the resources of the local bodies in the State on the basis of the recommendations made by the Finance Commission of the State. In addition of grants devolved from higher level of governments, local governments raise revenues through their own taxes and fees and through assigned revenues from the State government. Compared to PRIs which rely heavily on grants and assigned revenues, significant part of revenue of municipal bodies are raised through own sources.

- Own Sources: Local Governments collect receive revenue from taxes and non taxes. PRIs levy taxes like House Tax, Vehicle Tax, Water Tax, Advertisement Tax, tax on village products sold in the village etc. Among PRIs taxation powers vest mostly with Gram Panchayats. In some States intermediate panchayats also have taxation powers. Non tax revenues of PRIs include License Fees for Dangerous and Offensive trades, installation of machinery, encroachment fee, miscellaneous revenue from Markets, Ferries, Fisheries, Rent of shopping complexes, Inspection Bungalows etc. Tax revenues of municipal bodies include property tax, advertisement tax, taxes on animals, carriages and carts etc. Property tax collected by Corporations include a General tax, Water Tax, drainage Tax, Lighting Tax and Conservancy Tax. Non tax revenues of municipal bodies include water supply charges, donations, income from remunerative enterprises, building fee, layout fees, contributions for laying water pipes, encroachment fees, betterment charges etc.
- Assigned Revenues: refers to all forms of revenue transfers to local bodies from specific sources of State government revenue. There is wide variation between States in the nature and quantum of assigned revenues. In case of PRIs, they may include: Profession Tax, Entertainment Tax (Cinema Tax), Surcharge on Stamp Duty, Tax on Minor Minerals, Seigniorage fee on Sand, Cable Tax, Water Tax. Assisgned revenues of municipal bodies

include: profession tax, entertainment tax, surcharge on stamp duty, compensation for loss of income on tolls, motor vehicle tax and octroi.

- Grants: PRIs and municipal bodies receive Plan and Non Plan grants from Central and State governments. Grants may be ad hoc or based on size of population, a specific purpose or as an incentive for performance.

Data Sources for Local Government Expenditure

As local governments are a State subject, there are variations across States with regard to availability of data for NHA. However, there are some common data sources which may provide useful data for NHA. These include:

- Departments of Municipal Administration and Urban Development: As the administrative agencies of the State government responsible for municipal bodies, these departments are most likely to have data on grants and assigned revenues of municipal bodies. Since number of municipal bodies are much less than PRIs, it is also likely that consolidated accounts of municipal bodies are also available with these departments
- Departments of Panchayati Raj and Rural Development: As in the case of municipal administration departments, these departments also are likely to have data on grants and assigned revenues of PRIs. Consolidated accounts of PRIs may be difficult to come by at State level but data at district level may be available from the office of the CEO Zilla Parishad: and District Panchayat Office
- State Finance Commission: Since the mandate of the State Finance Commission is to review financial position of local bodies in the State, it is well placed to consolidate available financial data and make estimations regarding receipts and expenditure of local bodies in the State.
- State/Local Fund Audit Departments are tasked with the responsibility of auditing accounts of local governments. The consolidated audit and review report has to be laid on the table of the Legislative Assembly.
- Demand of Grants of Health Department in States where there is transfer of departmental funds to local bodies

Key Issues in Estimation of Health Expenditure of Local Bodies

- State wise study of local government expenditure is required given variations in form and availability of data. Since consolidation of accounts may not take place or is delayed at the State level, district level accounts or institution wise accounts need to be studied in greater detail.
- Generally health expenditure is reflected in the “public health” head of account. However, there are expenditures recorded under this head which falls outside the health accounts boundary. See for example Table 6.6, an example of expenditure of Public Health Expenditure of 1425 GPs in

Chittoor District of Andhra Pradesh. Expenditure incurred under heads of medical relief, control of epidemics and maternity and child welfare only fall within the health accounts boundary. Similarly, expenditure recorded under the "public health" head of account of municipal bodies in Andhra Pradesh also include expenditure on maintenance of burial and burning grounds, sanitation, fire protection and drainage which are clearly outside the health accounts boundary

Table 6.6 Public Health Expenditure of 1425 Gram Panchayats in Chittoor District of Andhra Pradesh

Expenditure Categories	Total (Rupees)	Percentage Share
Revenue Expenditure		
Medical Relief	15033181	39.22
Veterinary Relief	127750	0.33
Control of Epidemic Diseases	123260	0.32
Destruction of dogs	19389	0.05
Sanitation	2215984	5.78
Fairs & Festivals	371630	0.97
Maternity & Child welfare	148667	0.39
Maintenance of Burial Ground	1415700	3.69
Repairs to tanks, wells, drains etc.	18872686	49.24
Total Revenue Expenditure	38306191	100
Capital Expenditure	7224092	
Total Expenditure on Public Health (Rs)	4,55,30,283	
Source: District Panchayat Officer, Chittoor, Andhra Pradesh		

- Where there is transfer of funds to local bodies from departments such as health and family welfare, care should be taken to avoid double counting of expenditure

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Chapter Seven Exercises

Question One

You are preparing State Health Accounts for your State for the year 2005-06. For estimating state government expenditure on health which budget documents will you use and for which year.

Question Two

The State of Madhya Pradesh received a loan of Rs.100 crores from the World Bank towards developing first referral hospital services. The State has also availed a loan of Rs.40 crores from NABARD for constructing new primary health care centres. Under the National AIDS Control Program the State received a grant of Rs. 50 crores which has been financed by a World Bank loan. In addition the state also received a grant of Rs.50 crores from DfID as support for medium term health sector reforms. What entities are considered as source of funds for these loans and grants

Question Three

The Department of Health and Family Welfare (DoHMFW) in Andhra Pradesh has launched a health insurance program for reimbursing expenditure incurred by BPL families on hospitalized care in tertiary care hospitals for selected critical illnesses. Premium for the same is paid to a private insurance company which manages the program and is budgeted in the demand for grants of the department. Identify the source of funds, financing agent and providers involved?

Question Four

Rs. 1000 is paid to all BPL women who undergoes institutional delivery in Andhra Pradesh. Of this Rs.700 is paid under the centrally sponsored Janani Suraksha Yojana and Rs. 300 is paid under the State Sukhibhava scheme. About 500000 such deliveries were supported in 2006-07, funds for which was allocated to the Department of Health and Family Welfare. This money is given to meet expenses related to delivery and as an incentive for institutional delivery. Identify the source, financing agent, provider and function of this programme.

Question Five

In the Demand for Grants of the Department of Health and Family Welfare, Government of Andhra Pradesh it was seen that out of the Rs.1500 crores spent in 2004-05, the following sources of funds were identified

1. Rs 200 crores under centrally sponsored disease control and family welfare programmes
2. Rs 100 crores loan from the World Bank under the APERP
3. Rs. 50 crores grant from the DfiD under the APHSRP
4. Rs. 100 crore loan from a public sector financial agency to start 2 new medical colleges

The receipts budget indicated that Government of Andhra Pradesh received Rs.26 crore from the ESIC as contribution to the ESIS and Rs.50 crore as payments from public for department' services. In addition Societies for disease prevention and family welfare of the department received Rs. 100 crores as direct transfer from MoHFW under centrally sponsored programmes and an in kind support of about Rs.50 crore . Estimate total expenditure of the Department of Health and Family Welfare and contribution of various sources of funds

Question Six

A municipality includes expenditure on the following items under the "public health" head of account. Which of the items fall within the health accounts boundary of the Indian NHA?

1. Hospital and dispensaries:
2. Control of epidemic and endemic diseases
3. Sanitation
4. Prevention of Food Adulteration
5. Maternity and Child Welfare,
6. Maintenance of burial and burning grounds
7. Fire Protection
8. Drainage

Take Home Exercise

Given below are list of providers commonly found in most states. Using the NHA India Providers Code classify these providers with codes. Also, think about your own State and see if you can identify any other providers not included here. Classify the identified providers.

1. Sub Center
2. PHCs
3. Family Welfare/MCH Centres
4. Dispensaries

5. OSM Dispensaries
6. District Hospital
7. Private Doctor
8. Community Health Centre
9. Traditional Healer
10. NonProfit Hospital
11. Teaching Hospitals (Allopathy)
12. Other Tertiary Providers (Allopathy)
13. Research Institute under ICMR
14. State Institute of Health and Family Welfare
15. Hospitals Under Local Bodies
16. Government Paramedical Training Centers
17. Nursing Colleges
18. ANM training schools run by local bodies
19. Private Teaching Hospitals (OSM)
20. Public Health laboratory
21. Drug Control Administration
22. CGHS Dispensary
23. ESI dispensary
24. Hospitals under Public Sector Undertakings

Chapter Eight
Health Insurance and Employer Funds

Learning Objectives

- To familiarize participants with different types of health insurance mechanisms in the country
- To identify complexities in data on health insurance

Module Outline

- NHA Classification of Health Insurance Types and Employer Funds
- Examples of Social Health Insurance Programs in India
- Insurer Operations: Premiums, Benefits and Net Cost of Administration
- Complexities in Data on Health Insurance

Time Requirements

- In Session
  - Presentation: 45 minutes
  - Exercises: 45 minutes

Types of Health Insurance

Health insurance is a financing mechanism to minimize uncertainty of illness and cost of treatment. In insurance, there is pre-payment and pooling. So people pay a small amount when they are healthy. This contribution is shared among many people and is used to meet the health care costs of the enrolled members, when they need it. The financing agent is the institution that organizes the insurance, collect and pool the revenue and purchase health care from a provider. It could be an entity within the government, a parastatal body, a private company, a voluntary organisation or even a community based organisation. Sometimes the provider acts as the financing agent as in the case of employer managed facilities.

Financing Agents managing health insurance can be divided into two broad categories

- Social Health Insurance
- Private Voluntary Health Insurance

Distinguishing Between Social Health Insurance and Private Voluntary Health Insurance

Social health insurance is one where the policy holder is obliged or encouraged to insure by the intervention of a third party. An insurance programme is designated as a social insurance program if at least one of the following conditions is met:

1. participation is compulsory by law or by condition of employment;
2. the programme is operated on behalf of a group and is restricted to group members; or
3. an employer makes a contribution to the program on behalf of an employee.

In contrast, in voluntary medical insurance, individuals join by their own wish and pay from their own resources. It may be difficult to separate the two types of programmes, especially if insurance companies operate both types of schemes at the same time. Community based health insurance schemes are classified as a private voluntary insurance scheme if enrollment is voluntary and as a private social health insurance scheme if the programme is operated on behalf of a group and is restricted to group members

Types of Social Health Insurance

There are two types of social health insurance - public (social security) and private social health insurance. Social security funds constitute special kinds of institutional units which may be found at any level of government — central, state or local. Key features of social security schemes include the following:

- They cover the community as a whole or large sections of the community
- They are imposed and controlled by government units.
- They generally involve compulsory contributions by employees or employers or both
- The government exerts control over payment rates, participating providers, and terms on which benefits are paid to recipients
- The schemes cover a wide variety of programmes, providing benefits in cash or in kind for old age, invalidity or death, survivors, sickness and maternity, work injury, unemployment, family allowance, health care, etc.
- There is usually no direct link between the amount of the contribution paid by an individual and the risk to which that individual is exposed.
- They are separately organized from the other activities of government units and hold their assets and liabilities separately from the latter. They are separate institutional units because they are autonomous funds, they have their own assets and liabilities and engage in financial transactions on their own account.

In distinguishing between social security and private social health insurance, two factors are important: the intent of the programme and the control of the programme. Thus, if the beneficiaries of a scheme which cover the large part of the community and which are imposed and controlled by government units are eligible for a reason other than employment at a government entity, then the scheme would be social security (HF.1.2) If the government does not control the scheme or if it merely requires that the scheme be in place, perhaps with some broad guidelines or if some other entity exercises the principal control over the operation of the programme, then the scheme should be classified as private social health insurance (HF 2.1).

Employers contribute to social health insurance in several ways.

- They may contribute to social security (HF 1.2) schemes on behalf of employees as mandated by law. An example social security in India is the mandatory contributions to the ESIS
- Employers may institute group health insurance schemes to which they contribute on behalf of employees as per terms of employment. Since contribution is made on behalf of the employees, this is a mechanism of social health insurance. As contributions to such schemes are based on terms of employment rather than mandated by law, they are classified as private social health insurance (HF. 2.1). In India, these insurance schemes are generally managed by either the employer themselves or by public and private sector insurance companies which in addition to group insurance health schemes also offer private voluntary health insurance schemes (HF 2.2). Since both schemes are offered by the same entities rather than follow ICHA guidelines of classifying these financing agents separately, the Indian NHA has sought to differentiate between public sector insurance

companies under the umbrella of the General Insurance Corporation (HF. 2.1) and private sector insurance companies (HF.2.2). This classification may have to be revised in future as currently there is limited scope of classifying nonprofit social insurance organizations. Similarly, according to ICHA guidelines social health insurance schemes covering both government and private employees are to be included under HF 2.1. However in the Indian NHA, government employee insurance schemes are included under social security schemes (HF 1.2). Though the SHA recommends that programmes set up by governments for their employees only are not to be regarded as social security funds, government employee insurance schemes in India satisfy other criteria of a social security schemes such as government control over payment rates, participating providers, and terms on which benefits are paid to recipients as well as mandatory coverage[2] .

- Thirdly they may directly cover risk by managing health care facilities of employees or by reimbursing costs of health care availed by employees. The financing agents in this case are the employers themselves whether public or private sector firms (HF 2.5)

Examples of Social Health Insurance Programs in India

Employee State Insurance Scheme (ESIS)

Employees State Insurance Scheme of India, is an integrated social scheme tailored to provide protection to workers in the organized sector and their dependents in contingencies, such as Sickness, maternity or death and disablement due to an employment injury or occupational disease. The ESIS is managed by the Employees State Insurance Corporation (ESIC), a wholly government owned enterprise.

The ESI Act, 1948 applies to the following categories of factories and establishments in the implemented areas:

1. Non-Seasonal factories using power and employing ten (10) or more persons.
2. Non-Seasonal and non-power using factories and establishments employing twenty (20) or more persons.

Full Medical facilities for self and dependents are admissible from day one of entering insurable employment. Whereas the primary, out-patient, in patient and specialist services are provided through a network of Panel clinics, ESI Dispensaries and Hospitals, Super Specialty services are provided through empanelled medical institutions on referral basis.

[2] Mandatory coverage is more by default rather than law in case of schemes like the Central Government Health Scheme (CGHS). Individuals can opt out of the CGHS though in reality such attrition is low.

Cash Benefit include Sickness Benefit, Maternity Benefit, Disablement Benefit, Dependents Benefit and Funeral Expenses. As these benefits are basically intended to compensate for any loss of wages or earning capacity in times of physical distress rather than health care, these are excluded from our analysis.

The ESI Scheme is mainly financed by contributions raised from employees covered under the scheme and their employers covered under the scheme and their employers, at a fixed percentage of wages. Employees contribute 1.75 percent of wages and employers contribute 4.75 percent of wages. Employees earning upto Rs. 40/- a day as wages are exempted from payment of their part of contribution. Retired insured persons, who have been in insurable employment for at least 5 years before superannuation and disabled insured persons are entitled for medical care for self and spouse only on payment of Rs. 120/- as annual contribution. ESIC also earns revenue through rents, rates, fees, fines, forfeitures etc

Central Government Health Scheme (CGHS)

The Central Government Health Scheme, introduced in 1954 provides comprehensive medical care facilities to central government employees, members of their families and pensioners. The scheme also covers Members and ex-Members of Parliament; Judges of Supreme Court and High Courts; Employees of some semi-government and autonomous organizations; Accredited journalists; and Ex-Governors and Ex-Vice Presidents. The facilities under the scheme include outpatients care provided through a network of allopathic ayurvedic, homeopathic and 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, specialist consultations, and hospitalization facilities, in government hospitals as well as in certain private hospitals recognized under CGHS.

Ex-Servicemen Contributory Health Scheme (ECHS).

The ECHS is a publicly funded Medicare scheme for ex-servicemen (ESM) pensioners & their eligible dependents, which came into force from April 2003. Under the scheme out-patient treatment will be provided at 227 Polyclinics all over India (104 alongside service hospitals and 123 at nonmilitary stations). In-patient hospitalization & treatment will be provided through out-sourced civil hospitals & diagnostic centers at all these 227 locations, empanelled for the purpose. Emergency treatment in any hospital will be reimbursed by the ECHS. Treatment/hospitalization in Service Hospitals will also be available to ECHS members, subject to availability of speciality, medical staff and bed space. To enroll in the scheme, a one-time contribution based on the basic monthly pension (excluding DA), is required. Enrollment is voluntary for those who retired prior to 1st April 2003. Those retiring after this date compulsorily become members of

ECHS and their subscription will be directly deducted from their terminal benefits.

P& T Dispensary Scheme

The scheme of P&T dispensaries was started in 1951 in offices having concentration of 5000 or more beneficiaries to provide medical care, laboratory facilities for routine testing, family welfare services etc. Beneficiaries of the scheme include employees of Department of Posts and Department of Telecommunications, their dependents and pensioners of these departments. The P&T dispensaries are administered by Department of Posts through the respective heads of circles. The scheme essentially provides outpatient treatment. Government facilities are utilized for inpatient treatment and drugs are supplied by the dispensary.

Contributory Health Services Scheme (CHSS) of the Department of Atomic Energy

The CHSS covers both serving and retired personnel of the Department of Atomic Energy. Under this scheme the contribution by the employee will be 1% of his/her basic pay every month while that for retired employees will be 1% of basic pay drawn at the time of retirement. This scheme covers whole family. The Department of Atomic Energy provides free health services to primary beneficiaries, spouse, first and second child. Other dependents have to pay for the services rendered, as described in Table below.

Health services are provided by dispensaries and hospitals under the DAE. The CHSS follows two tier referral system. Each and every patient has to first visit a dispensary. Each dispensary has 1-4 doctors depending upon the work load, i.e. based on number of patients. One has to get the prior referral from dispensary doctor to secondary level and tertiary level hospitals. Facilities that are not available in DAE hospitals are provided at designated panel hospitals. For this a referral letter to the panel hospital or outside consultant will be issued to the patient. The patient has to take appointment, consult the doctor and them come back to the DAE hospital to continue the treatment. Referrals are restricted to patients requiring intervention in super speciality disciplines and very complex diseases.

In case of emergency, the in-patient (hospitalization) treatment can be availed in any hospital and expenses will be reimbursed. Certain existing specified Chronic Diseases e.g. HIV positive/AIDS cases treatment, are not covered under this scheme. However, the scheme has provision to settle the hospitalization expenses of such patients with chronic diseases. Certain specialties like infertility services, expensive cosmetic surgeries, and prosthesis are not provided under this scheme.

Insurer Operations: Premiums, Benefits and Net Cost of Administration

It is important to collect data in the correct time frame. Often, insurance data are reported on a cash basis, which reflects when benefit payments are actually made to the provider or policy-holder or when premium payments are actually received. Unless it is impossible to use an accrual method of accounting, figures should reflect when the covered services or goods are provided or when the months covered by the premiums occur.

In the NHA, there are two different spending measures related to private insurance. One is a measure of total incurred benefits, desegregated by type of provider or by type of service. The other is a measure of earned premiums. The difference between these two measures reflects administrative costs, additions to reserves, and retained surpluses. Data are required on all of these constructs in order to complete the NHA tables.

The benefit figure is used to estimate total personal expenditure on health, and the premium figure (together with any subsidies) is used to calculate national health expenditure. The difference between premiums and benefits, which is called the net cost of health insurance, is classified among the administrative functions. If this figure is negative, a financing source should be established to channel funds from retained earnings to current operations. However, entities cannot finance losses from retained earnings for long without becoming insolvent, so it is prudent to check for the existence of subsidies from government or from external sources as a form of revenue of insurance companies. The total addition to national health expenditure of the insurance scheme is the value of the premiums it earns plus subsidies received to supplement those premiums.

If only the benefit figure is available, the premium figure must be estimated. This can be done by finding or estimating what is called a “loss ratio”, which is the ratio of benefits to premiums, and dividing aggregate benefits by that ratio. Alternatively, an estimate of total administrative expenses (either in monetary units or as a percentage of benefits) could be added to total benefits. These estimates or figures can come from consultation with knowledgeable people, from experiences in countries similar in terms of the maturity of the insurance industry, or from some other type of process (such as the professional judgment of the NHA team). If all that is known is the premium figure, benefits must be estimated through the reverse of the process described.

Complexities in Data on Health Insurance

In many countries the insurance industry is evolving rapidly, with a bewildering variety of insurance products available. Often, health insurance is available in forms other than the conventional liability insurance contract (which has the main or sole purpose of reimbursing beneficiaries against medical expenses).

Examples include health insurance as a rider to life insurance policies, and health insurance as an additional benefit for holding a credit card. Where medical insurance is offered by general or life insurance firms, it may not be treated as a separate line of business, and administrative data may only report these expenditures aggregated under less specific insurance headings such as miscellaneous or general insurance. At the other end of the spectrum, some benefits provided by medical insurance policies fall outside the boundaries of health. For example, payments made to compensate an injured worker for lost income are not health care spending. In some countries, the lines between social security, social insurance, and voluntary medical insurance are blurred. Insurance companies may handle two or even all three types of insurance. In such cases, data sources need to be able to distinguish between the three types, to avoid double counting flows of insurance premiums.

Health accountants must familiarize themselves with institutional and legal descriptions and analyses of the industry so that they can convert administrative records into meaningful economic flows. The quality and level of detail of private insurance company data are correlated with the maturity of the market. Some data on the insurance industry may be available from routine sources. Where available data are insufficient, primary data collection through surveys is usually necessary. In collecting aggregate insurance expenditures, the survey must be constructed to include all relevant insurance products in the sampling frame, and if multiple types of medical insurance exist to make appropriate distinctions.

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Chapter Eight Exercises

Question One

What Financing Agent Code will you assign to the following insurance schemes

1. A community health insurance scheme operated by an NGO exclusively for women in self help groups who contribute to insurance premium
2. A contributory health insurance scheme of government employees operated by government
3. A Group Health Insurance scheme subscribed by a private firm from a public sector insurance company for its employees
4. A health insurance scheme for below poverty line population which is imposed, controlled, and financed by a government unit.

Question Two

The Employees State Insurance Corporation provided the following benefits to its enrollees. Expenditure on which of them will you include in NHA? Why?

1. Hospitalized Treatment in ESI hospitals
2. Outpatient Treatment in ESI dispensaries
3. Super- specialty treatment in empanelled hospitals
4. Sickness Benefit to compensate loss of wages during illness episodes
5. Maternity Benefit to compensate loss of wages during maternity leave
6. Disablement Benefit for disabled persons
7. Funeral Expenses

Question Three

The ESIC corporation spent Rs. 100 crores on providing medical benefits. Expenditure was met through contributions made by private employers and employees in the ratio of 4.75: 1.75. State governments provided Rs. 20 crore for operating expenses of ESI hospitals. What are the sources of funds for ESIC and estimate share of the different sources in the total health spending of ESIC

Question Four

A private insurance company collected Rs.10 crore in health insurance premiums and reimbursed claims of Rs. 7 crore for hospitalized treatment. In addition the company incurred administrative expenses of Rs.1 crore Which figures will you use in NHA and under what functions of care will you record the flow of funds through the insurance agency.

Question Five

A private insurance company collected Rs.20 crore in health insurance premiums from households and reimbursed claims of Rs. 19 crore for hospitalized treatment. In addition the company incurred administrative expenses of Rs. 3 crore. Which figures will you use in NHA and under what sources and functions of care will you record the flow of funds through the insurance agency?

Chapter Nine

Health Expenditure of the Non Profit Sector

Learning Objectives

- To understand legal and conceptual definitions of NGOs
- To gain an overview of the NGO sector in health care
- To identify secondary data sources on health expenditure by NGOs in the country and understand how to use such data for building health accounts

Module Outline

- Defining the nonprofit sector in India
- NGO sector in health care
- Need for separate classification for NPISH/NGOs
- Sources of funds of NGOs in health sector
- Data sources for health expenditure of NGOs
- Health expenditure of NGOs: Key survey findings

Time Requirements

- In Session
  - Presentation: 45 minutes
  - Exercises: 45 minutes

Defining Nonprofit Institutions Serving Households

A nonprofit institution is defined as a legal or social entity created for the purpose of producing goods and services, whose status does not permit it to be a source of income, profit or other financial gains for the units that establish, control or finance it. In practice, the productive activities of a nonprofit institution are bound to generate either surpluses or deficits, but any surpluses it happens to make cannot be appropriated by other institutional units. Nonprofit institutions serving households are separate legal entities. In India nonprofit status is accorded to organizations registered under provisions of various Acts of the Legislature. These include:

- Societies registered under the Societies Registration Act of 1860 and subsequent amendments made by State governments
- Trusts registered under the Indian Trusts Act, 1882 or the Charitable & Religious Trusts Act, 1920
- Companies registered under Section 25 of the Companies Act, 1956
- Trade Unions registered under the Trade Union Act, 1926
- Cooperatives registered under the Cooperatives Act, 1904

However, not all such organizations are considered as Nonprofit Institutions Serving Households. For instance, though Trade Unions and Cooperatives have a non-profit status legally, they are not considered as Nonprofit Institutions Serving Households. Other exceptions include "Government Organized Societies" such as the health societies under the National Rural Health Mission and the State AIDS Control Societies. These societies have been formed for greater flexibility in management of public health programmes and to serve as a conduit for easy transfer of new funds directly to entities involved in implementation of the programmes. In the current context these organizations are important financing agents. Though registered as nonprofit organizations, they are essentially part of the government framework and needs to be included as a suitable sub-class under the State departments of Health and Family Welfare. Similarly international NGOs while considered as a NGO in their home country is classified as a "Rest of the World" Financing Source in other countries.

In India the nonprofit sector is also referred to as the voluntary sector or as the non-governmental sector in government reports and Planning Commission documents. Traditionally, Nonprofit Institutions Serving Households have been known as Voluntary Organizations (VOs or VOLOGS), Voluntary Agencies (VAs or VOLAGs), Voluntary Development Organizations (VDOs) or Non Governmental Development Organizations (NGDOs). (Planning Commission, 2002) Nowadays they are most commonly referred to as Non Governmental Organizations (NGOs).

Need for Separate Classification for NPISH/NGOs

Nonprofit organizations operate in most health systems. In some cases, they operate health care facilities; or they may engage in public health activities, or finance health research. What distinguishes a nonprofit organization from a private firm is that most of its revenue is spent in non-market activity and stakeholders do not share any profit accrued to the organization. What distinguishes it from a government organization is the absence of a controlling government influence on its operation. The need for separate classification is now even more important given policy of most governments to encourage nonprofit sector in health care.

NGO Sector in Health Care

Although India has a long tradition of voluntary action, contribution of the nonprofit sector towards total health expenditure has gained significance more recently. NGO intervention amongst communities in organized manner can be traced to Christian missionary activity in early 1810s (Sen Siddhartha, 1993). Social reform movements which began under leadership of Raja Ram Mohan Roy and Vidyasagar toward mid 1820s led to evolution of non Christian NGOs. Besides building schools, colleges, hospitals and dispensaries, these movements were also concerned with social reform, especially abolition of child marriage and polygamy, improvement of women's social status etc. From 1870s institutions such as Brahmo Samaj, Arya Samaj, Ramakrishna Mission and Indian National Social Conference began to emerge from these social movements (Sen Siddhartha, 1993). Towards the latter part of the 19th Century other religious groups such as Muslims and Sikhs also emerged for organized social action to protect and develop their communities' interests. A large number of NGOs in a variety of fields emerged alongside India's freedom struggle. However with the exception of Gandhian/ Sarvodaya organizations and religious groups, contribution to the welfare sector by these NGOs is not considered to be of much significance (Jesani et. al., 1986). In the first two decades after Independence, efforts in health care by NGOs was limited to hospital based health care by rich family charities and religious institutions (Mukhopadhyay, 2000).

After independence, successive five year plans recognized the importance of the non governmental organizations in the welfare sector and made provisions to encourage participation of NGOs in the government's development efforts. The Central Social Welfare Board was created in 1953 to promote and fund voluntary organizations in organizing welfare programmes for women, children and handicapped. Gandhian organizations were enlisted for training of health workers. During the Third Plan period, NGOs were involved in anti leprosy drives and family planning education. In the Fourth Plan the thrust was on involving NGOs in family and child welfare programmes. During the Fifth Plan period financial assistance was given to NGOs providing medical care. NGOs

continued to be granted prominence in the implementation of the family planning programme (CAF, 2000).

Charity orientation of religious missions and Gandhian/Sarvodaya organizations which was the dominant approach for most NGOs began to change towards mid sixties. The strategy changed from a charitable approach to one of a community approach, where local resources were to be used for community's development (Jesani et. al., 1986). The Sixth Five Year Plan recognized the usefulness of such community health care projects and NGOs like the Jhamkhed Project on child and health care find special mention in the document as success stories in the field (Planning Commission, 2002). During this period, the NGOs began asserting their position and their representatives were included in government policy making bodies. Their efforts led to Planning Commission laying down criteria for identifying Voluntary Organizations for enlisting support in rural development programmes in the Seventh Plan and acknowledgment of the need of a larger role for NGOs in community development. The anti poverty and minimum needs programmes launched by the government had a health component which included programmes for MCH, family planning, communicable diseases, health education etc. The Seventh Five Year Plan declared that serious efforts would be made to involve NGOs in implementation of these programmes to supplement the governments efforts. The emphasis continued till the Ninth Plan, wherein efforts were made to promote people's participatory bodies like Self-help Groups.

The increasing support of the government especially in implementation of RCH and disease control programmes and greater access to external funds post economic liberalization have lead to greater participation of the NGO sector in health care. Today the NGOs working in the health sector are actively involved in service delivery, training and capacity building, health education, research, evaluation and policy making. A study commissioned by the Ministry of Health and Family Welfare functionally classified NGOs into broad groups (Table 9.1)

Table 9.1: Functional Classification of NGOs in Health Care Sector

Functional Class	Description
Providers of Medical Services	Includes (a) Hospitals. Primarily inpatient medical care and treatment. (b) Nursing homes. Inpatient convalescent care residential care, as well as primary health care services; includes homes for the frail elderly and nursing homes for the severely handicapped. (c) Health treatment, primarily outpatient. Organizations that provide primarily outpatient health services e.g., health clinics and vaccination centers. (d) Rehabilitation Centres. Inpatient and out patient rehabilitative therapy to individuals suffering from physical impairments due to injury, genetic defect, or disease and requiring extensive physiotherapy or similar forms of care
Providers of Public Health Services	Those primarily involved in disease control (HIV, TB, Leprosy etc), health promotional activities like Family Planning and other RCH activities etc., health education, awareness campaigns, counselling, advocacy and other health promotional activities
Education, Training, and Research Organizations	Includes medical, paramedical and public health colleges and training institutions and medical and public health research organizations
Funding Intermediaries	NGOs that acts financial intermediaries and source of funds to other NGOs and health programmes
Not classifiable	NGOs that cannot be classified in any of the above groups

Sources of Funds of NGOs in Health Sector

Government

Government funding is an important source of NGO's resource base. Government assistance to NGOs for health activities flows mainly from the Central Ministry of Health and Family Welfare and State Health Departments. Other central government ministries like Ministry of Social Justice and Empowerment, Ministry of Environment, Ministry of Rural Development etc., and state government departments such as Department of Tribal Welfare, Department of Women and Child Welfare may also fund NGOs in the health sector. Government funds may be direct assistance to the NGO's as discretionary grants or may be routed through government organized state level societies like

the State TB Society, Aids Control Society, RCH Society, Blindness Control Society, Leprosy Society etc.

External Assistance

International funding is an important source of financing voluntary efforts in the health sector. Foreign funds coming from bilateral agencies (DFID, USAID, SIDA, NORAD etc.) and multilateral agencies (UN organizations such as WHO, UNDP, UNICEF, Financial institutions such as World Bank and regional development banks like Asian Development Bank, and other institutions like European Community) are mainly channelled to NGOs through government departments and agencies. These agencies may also fund NGOs directly for health activities. Major part of foreign aid to the NGO sector comes from NGOs and private agencies in the west, especially Europe and North America. The financial assistance to the NGOs are mainly in form of grants such as project grants, matching grants, block grants, subsidies, administrative costs, grants for feasibility studies and evaluation etc

User Fees

NGOs may charge user fees for services rendered. This may be an important source of funding for organizations providing clinical services.

Others

Other sources of NGO funding include donations, membership fee, sale of publications, charity works, exhibitions, selling of products etc. Donations is a major source of funds for NGOs in India.

Data Sources for Health Expenditure of NGOs

Financing sources of NGOs vary greatly. Some NGOs are funded 100 percent from foreign sources whereas for others 100 percent come from their own revenues. For most NGOs there is a mix of different sources. Many NGOs are functional at the national level. Even though they may be based in a particular state their activities may be found in other states as well. In such cases it may be difficult to classify funds used for a particular state. Further, NGOs may carry out activities other than health care. Detailed breakdown of these funds by uses is not readily available. Surveys of NGOs are more likely to provide more reliable estimates of health expenditure. However, conducting surveys may not always be possible due to time and cost constraints. Alternate sources of data include:

- Government funds NGOs either through direct grants or through societies set up by it for specific programmes such as RCH and disease control. In its endeavor to streamline and simplify the procedure for providing assistance to the NGOs, the Department of Family Welfare, GOI, has evolved a system in which all the small organizations working at the

grass-root level are not required to go to the national Capital or State Capitals for getting the assistance. Under this scheme, small organizations at the village, Panchayat and Block levels (Field NGOs) are assisted through Mother NGOs. Field NGOs are involved basically for advocacy of RCH and Family welfare practices. A panel of 4 National NGOs has been selected under the RCH Programme to assess the credentials and performance of Mother NGOs on a regular basis. These National NGOs have a specific geographical area of coverage. Societies set up for disease control programmes include the State Aids Control Society, State Blindness Control Society and the State TB Society. District level societies are formed under the Chairmanship of the District Collector which disperses funds received from the State Societies, to NGOs enlisted in the district. The list of NGOs supported by each society, the annual reports of these NGOs and amount of grants received by each NGO can be obtained from the respective Societies.

- Some details of direct grants from the central MOHFW and State DOHFW to NGOs can be obtained from the Annual Reports and Demand for Grants of the MOHFW and from the DoHFW. It is however difficult to estimate actual contributions received by NGOs from MOHFW/DOHFW from these documents. This is because contributions are included under various heads of account and it is difficult to differentiate the amounts provided to the NGOs.
- NGOs have to be registered with the FCRA Division of Ministry of Home Affairs to receive foreign contributions. All NGOs have to report the details of foreign funds received to the FCRA Division annually. Information on foreign contribution to NGOs can be obtained from the "Annual Report, Receipt of Foreign Contribution by Voluntary Associations" of the Foreign Contribution Regulatory Authority (FCRA), Ministry of Home Affairs. The Report provides state wise details of funds and purpose wise funds received by NGOs. Funds received under Health and Family Welfare could be considered as foreign contributions to NGOs. It may be noted that funds received from Indian citizens living abroad and multilateral agencies such as UN bodies, World Bank Group, ADB, European Union etc., are not considered as "foreign" and hence do not get reflected in the FCRA receipts. A notification by the Ministry of Home Affairs, GOI, in November 2000, lists 123 agencies which are exempted from the purview of the FCRA
- Designated authorities such as Charity Commissioner and Registrar of Societies are also potential sources of data as NGOs are required to submit their audited accounts annually.
- Information about user fees collected by the NGOs can be determined directly from the NSS survey data as expenditure by households on charitable institutions.

Health Expenditure of NGOs in India: Key Survey Findings

A national survey of NGOs done as part of the Indian NHA 2001-02 provided information on the sources of funds for health care by NGOs and expenditure by functions of care. Table- 9.2 provides contribution of each source to NGOs for health in 2001-02. Households are the largest source of funds, contributing about 42% of the total income of NGO' for health care by way of client payments for services and donations. "Rest of the world" or international funding is the second major contributor to NGO finances for health, contributing 26% of the funds. NGOs themselves are a major contributor to NGO finances. Funds in this regard came mainly from the resources raised by NGOs through sale of produce, agriculture, publishing of books, rent etc. Major Indian NGOs which funded smaller NGOs for health care was the other source of funds from the NGO sector. About 12.2% of funds received by NGOs for health, came from the NGO sector in 2001-02 and 2002-03 respectively. Approximately 12% of funds received by NGOs for health, came from the central government. About 5.7% of funds received by NGOs for health, came from State government agencies.

Table 9.2: Sources of Health Care Funds of NGOs in India 2001-02

Sources of Funds	% Share	Rs. Crore
Central Government	11.96	241.64
State Government	5.68	114.76
International Agencies	24.53	495.61
Donations from Foreign Citizens	1.54	31.11
Local Bodies	0.12	2.42
Indian Funding Agencies	1.11	22.43
Own Resources	11.05	223.25
Indian Households		
Client Payments	37.01	747.75
Donations	4.48	90.51
Private Firms	2.32	46.87
Financial Institutions	0.17	3.43
Total (Rs. Crore)	100.00	2020.20
Source: George and Pattnaik (2004)		

Table 6.3: Health Expenditure of NGOs in India by Functions (2001-02)

Function	% Share	Rs. Crore
Curative Services	41.09	830.08
Medical Goods/Pharmacy Services	9	181.81
Ancillary Care Services	4.91	99.19
Rehabilitative Services	5.4	109.09
Communicable Disease Control	14.85	299.99
Non Communicable Disease Control	2.37	47.88
RCH Programme	6.78	136.97
Testing of Food/Water	0.05	1.01
Training, Education & Research	7.83	158.18
Capital Formation	2.38	48.08
Health Administration & Health Insurance	0.02	0.40
Functions not specified	5.31	107.27
Total	100.0	2020
Source: George and Pattnaik (2004)		

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Chapter Nine Exercises

Question One

Which of the following will you consider as a nonprofit agency in National Health Accounts for India? Why?

1. Charitable Hospital registered under Societies Act in Maharashtra
2. Bill and Melinda Gates Foundation
3. Tata Foundation
4. State AIDS Control Society
5. A US based international organizations having NGO status with the United Nations
6. A health research organization registered under the Trusts Act in Kerala
7. Indian Red Cross Society

Question Two

Expenditures on which of the following programmes undertaken by a NGO will you include in NHA? Specify under which functions of care will they be included.

1. HIV prevention programme
2. Noon meal programme for school children
3. Food supplementation given to below poverty line pregnant women
4. Watershed programme
5. Community Health Insurance for women self help groups for hospitalized treatment
6. Home for the elderly
7. Research on effectiveness of DOTS provider
8. Reimbursement of hospitalization expenses of NGO staff

Question Three

An NGO working in the health sector received Rs. 20 lakhs from Ministry of Health and Family Welfare, Rs. 10 lakhs from World Health Organization, Rs. 10 lakh from the Department for International Development (DfID) of the British government, Rs.10 lakhs from the World Bank and Rs. 25 lakh from Bill and

Melinda Gates Foundation for delivering various health services. Which of these funds will be reported under FCRA requirements?

Question Four

A survey of NGOs for the year 2005-06 report that 10% of annual health expenditure of NGOs in India was financed by international NGOs, 10% by bilateral agencies and 5% by multilateral agencies such as World Bank, UNICEF, WHO, UNDP etc., 20% by central government ministries, 10% by state government departments, 5% by donations from private enterprises, 10% by donations from Indian citizens and remainder by user fees collected from the general public. The "Annual Report, Receipt of Foreign Contribution by Voluntary Associations" for the year 2005-06 of the Foreign Contribution Regulatory Authority (FCRA), Ministry of Home Affairs report that NGOs in India received Rs. 100 crore for health care activities. Using the above information estimate total health spending by NGOs in 2005-06 and contribution of different sources.

Chapter Ten
Household Health Expenditure

Learning Objectives

- To gain an understanding of different components of household health expenditure and their classification in health accounts
- To identify data sources on utilization of health care and household health expenditure
- To familiarize participants in using household surveys for estimating out of pocket health expenditure by households

Module Outline

- Households as a source of funds and a financing agent
- Health care functions on which households incur expenditure
- Data Sources for Household Health Expenditure
- Estimating Out of Pocket Household Health Expenditure

Time Requirements

- In Session
  - Presentation: 45 minutes
  - Exercises: 45 minutes

Households as a Source of Funds and a Financing Agent

Households are the most significant source of funds for health care in India. According to NHA 2001-02, households contributed 72% of the total health care expenditure in the country. Households are also the major financing agent in the Indian health care system as bulk of the expenditure is accounted by direct out of pocket payments to providers. In 2001-02, more than 98% of the household expenditure was direct out of pocket expenditure. The remainder was accounted by household contributions to social insurance schemes (ESIS, CGHS and other employee insurance schemes) and private voluntary health insurance; and donations to NGOs for health care.

There are some instances when households directly pay the providers but are not considered as the financing agent.

- User fees in government hospitals. According to the Producers Guide, households are considered both as the financing source and the financing agent in case of user fees. However, in the Indian context, households are not considered as the financing agents in such cases. There are 2 mechanisms of collection of user fees.
  - In the first mechanism, user fees collected by the public provider is not retained by either the provider or the ministry/department but credited into the consolidated fund of the country/state. In such a case, the Producers Guide does not consider the household expenditure in health accounts at all, arguing that these funds are mingled with general revenues and may not be used for health purposes at all. However, since this is an additional expenditure incurred by the households and from a policy point of view it is necessary to account for all household expenditures, in the Indian NHA these funds are shown as flowing from household as the source to the ministry/ department as the financing agent. Since the ministry/department does not actually get these additional funds to spend, these are deducted from the contribution of the respective governments as indeed, the household funds have gone to the government.
  - In the second mechanism, funds are collected by governing societies of public hospitals such as the Rogi Kalyan Samithi. These funds are available for health care functions of the providers as per guidelines issued by the Ministry/Department of Health. Since the administrative control of how these funds are utilized lies with the ministry/department, they are considered as the financing agents rather than the households. In the FS X HF table in the Indian NHA these funds are shown as flowing from households to ministry/department. Since these funds are supplemental to ministry/departmental funds, there is no need to deduct the same from the ministry/department allocation.

- Funds reimbursed to households by insurance. In many instances, households pay the provider directly and later gets reimbursed by the insurance company. Here, since administrative control of use of insurance funds lies with the insurance company, they are considered as the financing agent and not the household. In the HF X HP table funds are shown as flowing from insurance company to the provider.

Health Functions on which Households Incur Expenditure

Households incur expenditure on a variety of personal health services (HC.1 - HC.5). Personal health services are functions of personal health care and comprise services provided to individuals. They include:

- HC.1 Services of curative care,
- HC.2 Services of rehabilitative care
- HC.3 Services of long-term nursing type care
- HC.4 Ancillary services to health care
- HC.5 Medical goods dispensed to out-patients

HC.1 to HC.3 are classified by modes of production as outpatient care, inpatient care, day care and home care. Ancillary care services include diagnostic services and patient transport. Medical goods include medicines and other goods consumed by households with or without a prescription from medical or paramedical professionals. See Chapter Four for detailed discussion on personal health services.

It may be noted that services under HC.1- HC.3, whether outpatient care, inpatient care, day care or home care also includes ancillary care services like diagnostics and patient transport as well as medical goods. However HC.4 and HC.5 refer only to ancillary care services and medical goods provided to outpatients outside an institutional setting. Drugs and diagnostic services purchased from hospitals as part of hospitalized care is included under inpatient curative care. Similarly drugs and diagnostics which is part of the package of services given by a medical practitioner is classified under outpatient care.

Households also incur expenditure on family welfare services such as delivery services, antenatal care, postnatal care and family planning as well as on disease prevention measures such as immunization. Expenditure on these services are included under HC. 6 Preventive and Public Health Services when they are part of a public health programme. However, when such services are purchased by the households they are included under HC.1 Services of curative care.

Households as Providers

Households are important providers of care in India, especially in case of long term nursing care. Normally they are classified under HP 7.2 Private households

as providers of home care. Unlike more developed countries where social transfers are paid to household caregivers, in India caregivers are usually unemployed family members. Since value of their labor is not monetized, these expenditures are not included in health accounts

Data Sources for Estimating Household Health Expenditure

Four types of data are required for estimation of household health expenditure as per NHA classes:

- Burden of disease data
- Health care utilization data
- Data on household health spending
- Demographic data

Burden of Disease Data

Data on burden of disease is a key requirement to estimate number of persons requiring different types of care. Data on selected diseases and conditions reported at public hospitals are routinely collected and collated. However, there is no mechanism to collect such data from the private sector which caters to bulk of the health care requirements in the country. Some information on disease prevalence is available from occasional small scale studies. Such information is usually not generalizable to the country as a whole. The only available information at the national and state level on overall morbidity pattern comes from periodical surveys of the National Sample Survey Organization (NSSO). The NSSO 60th Round carried out in 2004 provides information on the proportion of:

- Persons reporting ailment during a period of 15 days
- Ailing persons receiving non-hospitalized treatment from medical/other providers during a period of 15 days
- Persons hospitalized during a period of one year

Health Care Utilization Data

Data on utilization of health care services is an important input for estimating household expenditure on health care. Data on utilization of public facilities for different components of health care are collected and collated at regional and sub departmental levels and are reported in documents such as the “Performance Budgets” and “Annual Reports”. This data is used for monitoring of performance of health care institutions and health programmes. However the reliability of this data is suspect. A study which analyzed internal consistency of data reported by about 150 secondary hospitals in Andhra Pradesh, found that upto 30% of the data elements were reported erroneously by hospitals. Reasons identified for

inaccuracy of the data include: totaling errors, improper registration channel and maintenance of primary registers, lack of knowledge and negligence of staff etc (IHS, 2000). There is no system in place, for reporting utilization of health care facilities in the private sector. Under these circumstances, we have to depend upon household surveys to provide insights into the pattern of utilization of health care services in the country.

The NSSO 60th Round Survey provides information on the distribution of hospitalized and non hospitalized treatment availed from public and private providers. However, unlike the previous 52nd Round, the survey does not differentiate between various types of private and public providers except in the case of pre and post hospitalization care where providers are differentiated into hospitals and dispensaries in the public sector and hospitals and private doctors in the private sector. The survey also provides information on the distribution of delivery services, antenatal and postnatal care availed from the public and private sector. While the survey provides information on proportion of children of age 0 – 4 years who received any immunization during a period of 365 days, the provider is not specified.

Box- 10.1: National Sample Survey Organization

The NSSO was set up as a permanent survey organization by the Government of India, to collect data on various aspects of the Indian economy through nationwide sample surveys. The NSSO surveys are carried out in the form of successive "rounds". NSSO carries out regular consumer expenditure surveys in each round of its continuing large scale national survey activity. Each round is normally of a year' duration and is usually a multi-subject enquiry. The surveys are conducted through household interviews, using a stratified random sample of households covering practically the entire geographical area of the country. The NSSO also conducts consumer expenditure surveys on larger-than-usual-scale every 5 years or so, to generate more disaggregated data on various aspects of the household consumption. This is popularly known as " data of quinquennial series". Annual consumer expenditure surveys provide data on household expenditure on medical goods and services for institutional and non institutional care. Once in a cycle of ten years, an NSSO Round focusses specifically on health care. Such surveys were carried out as part of the 42nd Round (1986-97), the 52nd Round (1995-96) and the 60th Round (2004). The 6oth Round collected data on morbidity profile of the population, utilization of curative health care services including maternal care and immunization services and expenditure incurred on these services.

The National Family Health Survey (NFHS-3) captured distribution of households by the source of health care that household members generally use when they get sick. Table 10.1 shows the different providers from whom households in India usually avail care from. The NFHS-3 also provides information on utilization of family planning services, antenatal care, postnatal care, delivery services and immunization of children age 12-23 months.

Table 10.1: Percent distribution of households by the source of health care that households generally use when they get sick, India, 2005-06

Source	% Share
Public Medical Sector	**34.4**
Government/municipal hospital	15.5
Government dispensary	1.5
UHC/UHP/UFWC	0.3
CHC/rural hospital/PHC	15.1
Sub-centre	1.4
Anganwadi/ICDS centre	0.1
Other public medical sector	0.5
NGO or trust hospital/clinic	0.4
Private Medical Sector	**64.8**
Private hospital	16
Private doctor/clinic	39.5
Private paramedic	0.9
Vaidya/hakim/homeopath	0.5
Traditional healer	0.2
Pharmacy/drugstore	0.8
Other private medical sector	7.1
Other Sources	**0.2**
Home Treatment	0.1
Other	0.1
Source: NFHS-III, IIPS and Macro International (2007)	

Data on Household Health Spending

Household spending includes direct out of pocket payments to providers; contributions to social insurance schemes and private voluntary health insurance; and donations to NGOs for health care. Except for contributions to insurance schemes and user fees paid to government hospitals for which data is available from insurance and government agencies respectively, data on other household spending comes from large scale surveys- household surveys in case of out of pocket health expenditure and NGO surveys for donations by households.

Out of pocket health expenditure data in India, is primarily sourced from NSSO surveys. Annual consumer expenditure surveys of NSSO provide data on household expenditure on medical goods and services for hospitalized and non hospitalized care. However, data from annual surveys does not differentiate

between expenditure on public and private providers. Provider wise expenditure data is available from special NSSO rounds on morbidity and health care. NSSO 60th round provides information on average medical expenditure per hospitalization and average medical expenditure for non-hospitalized treatment per ailing person. In addition, the survey provides data on "other expenditure" incurred for health care during the reference period- 15 days for non-hospitalized treatment and 365 days for hospitalized treatment. Medical expenditure includes expenditure on items like bed charges, medicines and medical consumables, fees for the services of medical and paramedical personnel, charges for diagnostic tests, operations and therapies, charges of ambulance, costs of oxygen, blood, etc. Other expenditure incurred for treatment include: lodging charges of escort, attendant charges, cost of transport other than ambulance, and cost of personal medical appliances.

The 60th Round also provides information on average expenditure for immunization per child, child birth, antenatal and postnatal care for a reference period of 365 days. Data on provider wise household expenditure on family planning services is available from NFHS-3 data.

A key issue in the use of data from NSSO morbidity and health care rounds is the long gap between two rounds. This means that adjustments have to be made to data in years subsequent to the special round survey till the next round results are out. In the Indian NHA, the growth rate of per capita expenditure on medical institutional items (for inpatient care) and non institutional items (for outpatient care) between the special round and the year for which NHA is being prepared, captured from NSSO routine surveys is used to inflate estimates calculated by the special round data.

Demographic Data

Household surveys are sample surveys which gives utilization as a proportion and health expenditure as average cost per unit of service. To extrapolate this data to the whole state or country additional demographic data is required. This include:

- Population data to arrive at total number of persons by sex and place of residence. This data is available from the decennial census and projections based on the census done by the Registrar General of India (RGI).
- Data on birth rate and still birth rate/neonatal/infant mortality rate to arrive at number of pregnancies and children for estimating expenditure on family welfare services. This data is available the Sample Registration System (SRS).

Estimating Household Health Expenditure from Surveys

The process of estimating OOP health expenditure from surveys is explained using an example. Further adjustments may be required for the data but here we are focussing only on the basic process.

Example: Estimation of out of pocket expenditure on inpatient care in India using NSSO 60th Round data and allocation of expenditure by NHA classes

Establish which year the data pertains to. Since survey was carried out in first half of 2004, data pertains to 2003-04 and 2004-05. A year has to be fixed as per requirement of NHA. Estimates of household expenditure may be required to be adjusted for price and population based on base year chosen. In this example let us assume the year 2003-04

1. Find estimated rural and urban mid year population of India in 2003-04. The data can be obtained from RGI population projections based on 2001 census.
2. Find what was the hospitalization rate/1000 population for rural and urban India as per the survey
3. Calculate total number of hospitalizations in rural and urban India by applying hospitalization rate to population
4. Find what proportion of hospitalizations in rural and urban India took place in public hospitals and private hospitals
5. Calculate number of hospitalizations in rural and urban India by public and private provider by applying proportion of hospitalizations to total hospitalizations
6. Find what was the average expenditure/hospitalization in urban and rural India for public and private hospitals
7. Calculate total expenditure on hospitalization by multiplying average expenditure in public and private hospitals with number of hospitalizations estimated in step 5
8. We have now estimated total household expenditure on health for hospitalization in public and private hospitals. To arrive at actual OOP expenditure reimbursements from insurance and employers must be deducted.
9. Since expenditure is on hospitalization, entire expenditure is classified under HC.1.1 Services of inpatient curative care.
10. Two broad groups of providers -public hospitals and private hospitals, have been identified. If additional data is available from other sources expenditure can be further disaggregated by providers. For example: if an estimate of household spending on hospitalization is available from an NGO survey, this

can be deducted from estimated expenditure on private hospitals and can be shown as expenditure on charitable hospitals.

Table 10.2: Worked out example of estimation of household expenditure on hospitalization from NSSO survey

Steps		Rural	Urban	Total
1	Population	762345000	300043000	1062388000
2	Hospitalization/1000	23	31	
3	Total number of hospitalizations	175339350	93013330	
4	Percentage distribution of hospitalized treatments by:			
	Public hospitals	42	38	
	Private hospitals	58	62	
5	Number of hospitalizations in:			
	Public hospitals	73642527	35345065	
	Private hospitals	101696823	57668265	
6	Average expenditure/hospitalization			
	Public hospitals	3238	3877	
	Private hospitals	7408	11553	
7	Total household expenditure on hospitalization (Rs. Million)			
	Public hospitals	238455	137033	375487
	Private hospitals	753370	666241	1419612
	Total (Rs. Million)	**991825**	**803274**	**1795099**

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Chapter Ten Exercises

Question One

One of the members of a household undergoes surgery at a private hospital. The household incurred an expenditure of Rs. 25000 on surgery fees, Rs. 10,000 on diagnostic tests, Rs. 3000 on medicines and Rs. 2000 on ambulance charges. Classify the above expenditure by functions of care?

Question Two

A patient seeks treatment from an allopathic private doctor as an outpatient. The doctor conducts a blood test of the patient in his clinic and dispenses some medicines to her. In addition, the doctor provides a prescription for a medicine to be purchased from an outside pharmacy. The patient spends Rs. 100 on doctors fees, Rs, 50 on drugs dispensed by the doctor, Rs. 50 for the blood test conducted in the clinic, and Rs. 100 on medicines purchased from the pharmacy. Classify these expenditures by functions of care and provider?

Question Three

An accident victim is brought to a private hospital in an ambulance. The doctor prescribes an X-ray from a nearby diagnostic centre. The X-ray reveals that the patient has a fracture. A minor surgical procedure is done to correct the fracture. Patient is immobilized with a cast and sent home the same day. The patient spent Rs. 2000 on hospital expenses, Rs. 500 for the ambulance and Rs. 200 on the X-ray? How will you classify these expenditures by function and provider?

Question Four

An elderly man is paralyzed and requires nursing care. In the first year he is provided nursing care by his daughter at home. In the second year he is provided nursing care at home by a trained ANM hired from the Red Cross society. Under which functional and provider categories would you include the aforesaid services in NHA?

Question Five

A man undergoes hospitalization in a private hospital. He paid Rs. 4500 for hospital expenses. This was later reimbursed by a private voluntary insurance scheme managed by a private sector insurance company which had provided him health insurance cover on payment of an yearly premium. How will you depict the flow of funds for the aforesaid transaction in the HF X HP table.

Question Six

A woman delivers a child in a private hospital. She incurs an expenditure of Rs. 1500 on antenatal care, Rs. 12000 on delivery services and Rs. 2000 on postnatal care. Under which functions will you classify these expenditures?

Question Seven

From a household survey, expenditure on the following were estimated for a State. Estimate total expenditure of households as a source of funds for health care in the State.

Outpatient Care	Rs. 9800 million
Inpatient Care	Rs. 3200 million
Ancillary Care Services	Rs. 3600 million
Medical goods dispensed to outpatients	Rs. 4400 million
Reimbursement by employers	Rs. 1200 million
Reimbursement by private voluntary insurance	Rs. 800 million
Contribution to insurance premium	Rs. 1100 million

Chapter Eleven

Applying the NHA Methodology: Case Study from India

Learning Objectives

- To gain practical experience in organizing data for NHA
- To gain hands on experience in filling NHA matrices

Module Outline

- Filling in Matrices FS x HF
- Filling in Matrices HF x HP
- Filling in Matrices HF x Functions

Time Requirements

- In Session
  - 3-4 sessions- 360 minutes

Note To Faculty

The case study has three exercises that are intended to provide practical experience in organizing data for NHA and filling NHA matrices. The sessions for working out the case studies are to be used for clarifying and refining concepts previously learned.

These exercises are based on the Indian context. The previous sessions will have grounded the trainees in the context, actors and policy requirements of NHA in India. The data used in this exercises are loosely based on the NHA of India 2001-02. Please note that the figures are not actuals, nor do the exercises cover the entire spectrum of actors. Further, exercises are limited to broad NHA categories. Faculty should use opportunity provided by discussion to touch upon the detailed classification and demonstrate how entities are grouped under broad categories. The focus of these exercises is to ensure that the participants understand NHA concepts and apply them correctly.

Handouts with blank tables needed for the exercise as well as worked out spreadsheets are included in the CD accompanying the manual. The exercise along with blank tables should be provided to all participants. It would be useful to provide participants with calculators and/or facility to work with spreadsheets.

For a workshop with less than 12-15 participants, the case study can be implemented in a plenary setting. If there are more number of participants it is advisable to split the participants into groups of 10-12 and additional trainers be engaged

The trainer should walk through each question with the participants. Allow on an average, about 5 minutes per question for participants to read and answer questions. Volunteers from the group could voice their answers and the trainer should explain each step using a LCD or Overhead projector. Worked out tables for each question is provided in the answer key.

Exercise One: Filling in the FS X HF Table

The exercise begins at a stage where the initial four steps of filling up the NHA tables have been completed by the NHA team. The team has:

- Started in the middle (HF table)
- Identified the Financing Agents
- Determined various types of expenditures; and
- Estimated amounts for each Financing Agent

ICHA Code	Financing Agents	Expenditure
HF 1.1.1.1	Ministry of Health and Family Welfare	24,629
HF 1.1.1.2	Other Central Ministries and Divisions	2,132
HF 1.1.2.1	State Department of Health	141,699
HF 1.1.2.2	Other State Departments and Agencies	2,311
HF 1.1.3	Local Government	31,784
HF 1.2.1.1	Central Government Employee Insurance Schemes	25,797
HF 1.2.1.2	State Government Employee Insurance Schemes	5,119
HF 1.2.2	Employees State Insurance Corporation	17,954
HF 1.2.4	Other Social Security Funds	790
HF 2.1	General Insurance Corporation (GIC)	7,823
HF 2.2	Private Insurance Companies	202
HF 2.3	Private/Household' out-of pocket Payment	744,225
HF2.4	Non Governmental Organizations	8,540
HF2.5	Public and Private Firms and Corporations	44,336
NHE	Total National Health Expenditure (Rs Million)	1,057,341

Worksheet for Case Study: FS X HF Table

ICHA Code	Financing Agent (HF)	Financing Sources (FS)							Estimated Total (Rs. Million)
		FS 1.1.1	FS 1.1.2	FS 1.1.3	FS 2.1	FS 2.2	FS 2.3	FS 3	
		Central Govt	State Govt	PRIs & ULBs	Firms	House holds	NGOs	External Aid	
HF 1.1.1.1	MoHFW								24,629
HF 1.1.1.2	Other Central Ministries/Agencies								2,132
HF 1.1.2.1	State Department of Health								141,699
HF 1.1.2.2	Other State Departments/Agencies								2,311
HF 1.1.3	Local Government								31,784
HF 1.2.1.1	Central Govt Employee Insurance								25,797
HF 1.2.1.1	State Govt Employee Insurance								5119
HF 1.2.2	Employees State Insurance Corporation								17,954
HF 1.2.4	Other Social Security Funds								790
HF 2.1	General Insurance Corporation (GIC)								7,823
HF 2.2	Private Insurance Companies								202
HF 2.3	Household' out-of pocket Payment								744,225
HF 2.4	Non Governmental Organizations								8,540
HF 2.5	Firms and Corporations								44,336
NHE	Total Expenditure (Rs. Million)								1,057,341

Begin to fill the given FS X HF Table by disaggregating funds received by the financing agents from various sources.

Question One:

It is learnt that Ministry of Health and Family Welfare receives funds from four sources. Which cells can you fill up using the following information

- Rs. 40,521 million from central government
- Rs. 2000 million as loan from World Bank guaranteed by the GoI
- Rs. 9900 million as grant from bilateral/multilateral agencies
- Rs 482 million raised as fees for services
- Rs. 23, 696 million is provided as grant in aid to various State Departments of Health by the MoHFW
- Rs. 3494 million is provided as grant in aid to the Central Government Health Scheme
- Rs. 602 million is provided as grant in aid to NGOs

Question Two

Which cells can you fill up using the following information

- All other ministries contribute Rs. 21,885 million towards health insurance schemes for its own employees. Households also contribute to central government employee insurance schemes.
- The Ministry of Finance contribute Rs. 327 towards a social security scheme for health care of Below Poverty Line population
- Rs. 2132 million was spend on health facilities maintained by other central ministries.
- Women and Child Welfare Ministry provides a grant in aid of Rs. 713 million to State Women and Child Welfare Departments for health care of under five children.

Question Three

When the demand for grants of all the State Departments of Health in the year 2001-02 were compiled, a total of Rs. 157,834 million was found to have been spend on health through budgets of various State Departments of Health. This spending was financed through grants from central government, state government and external donors. State health departments received Rs. 9799 million from external donor agencies. State Departments of Health also raised extra budgetary

funds of Rs. 4093 million from user fees. From the State government contribution to the State Health Department budgets, the grants given below were routed. Which cells can you fill up using this information?

- Rs. 17, 287 million to local bodies for health
- Rs. 383 million to other State departments
- Rs. 984 million to NGOs
- Rs. 111 million paid by State Department of Health as premium for a health insurance for family planning acceptors, operated by a public sector insurance company.
- Rs. 327 million to social security funds

Question Four

After consolidation of expenditure data of departments other than health, in all the States it is found that a total of Rs. 10536 million was spend by other State departments. The other state departments receive funds from central and state governments. State government funds are used by departments to manage their own health facilities but bulk of the funds are spent on ESIS and State government employee insurance schemes. Rs. 5119 million and Rs. 3106 million were spent on State government employee insurance schemes and ESIS respectively. What cells can you fill using this information?

Question Five

It is found that spending of local bodies is funded by two sources- state government and own revenues of local bodies. Which cells can be filled with this information.

Question Six

It is known that a total of Rs. 17,954 million was spent on health care activities by the ESIS. As seen earlier, state governments contributed Rs 3,106 million to the ESIS. The remainder is financed by the employer and employee contributions. Though the exact break up of employer and employee contributions is not known, it is learnt that contribution to ESIS premium is shared between employees and employers in the ratio 27:73. Which cells can you fill up using this information.

Question Seven

A national survey of NGOs in India found that health care by NGOs was financed by a variety of sources. Relative contribution of each of the financing source to total NGO funds flowing through NGOs is given below. Pooling

information from a number of official sources it is learnt that NGOs received Rs. 5148 million as grants and donations from outside the country. What cells can you fill up using this information.

Source of Funds for Health Care	Relative Share (%)
Grants from Central Government	3.7
Grants from State Government	4.16
Donations from Firms	0.5
Donations by Individuals	4.48
Grants and Donations from Outside the Country	25.5
Grants/Donations from NGOs	3.96
Fee for Health Care Services	57.7
Total	100

Question Eight

A survey of public sector and private sector companies in the country indicated that firms contribute in different ways for health care of its employees. This includes contribution to ESIS, group health insurance, reimbursement of health care costs and maintenance of facilities. The actual contribution for health care through ESIS was not clearly identifiable from survey as contribution to ESIS included premium for other social security benefits outside health care benefits. Results of the survey showed that firms spent Rs. 44,336 million on managing their own facilities and providing reimbursement. In addition Rs. 2200 million and Rs. 207 million were contributed to public sector and private sector insurance companies towards premium for group health insurance. What cells can be filled up using this information.

Question Nine

A survey of all insurance companies offering health insurance in the country was carried out. Public sector insurance companies received Rs. 2353 million and Rs. 5359 million as premium for group health insurance and individual health insurance schemes respectively. Private insurance companies received Rs. 170 million and Rs. 32 million as premium for group health insurance and individual health insurance schemes respectively. What cells can be filled up using this information.

Question Ten

The OOP health expenditure has already been estimated and provided in the total column. Include this in the appropriate cell. The FS X HF cell is now ready.

Before the table is finalized do a trial sum of the columns and see if it matches with the estimated sum of the rows given at the start of the exercise.

Question Eleven

On further investigation, it is it is found that Rs. 482 million raised as fees from households does not actually accrue into MoHFW account as they are directly paid into the Consolidated Fund of India. Similarly from user fees collected by State Departments of Health, Rs. 1000 million was directly paid into the Consolidated Fund of India. In both these cases, there has been double counting. How will the accounts be reconciled in light of this new information.

Exercise Two: Filling the HF X HP Table

This exercise begins at a stage where health expenditure by key financing agents have been estimated. Fill the given FS X HP Table by disaggregating funds received by providers from various financing agents.

Worksheet for Case Study: HF X HP Table

ICHA Code	Health Providers (HP)	Financing Agent (HF)							
		HF 1.1.1.1	HF 1.1.2.1	HF 1.2.2	HF 2.1	HF 2.3	FS 2.3	HF2.5
		MoHFW	State Health Depts	ESIS	GIC	House holds	NGOs	Firms
HP 1.1.1	Central Government Hospitals							
HP 1.1.2	State Government Hospitals							
HP 1.1.4	Hospitals under Social Insurance							
HP 1.1.5	Hospitals owned by Firms							
HP 1.1.6	Private Hospitals							
HP 1.1.7	Charitable Hospitals							
HP 1.4	ISM Hospitals							
HP 3	Providers of Ambulatory Health Care							
HP 4	Retail Sale of Medical Goods							
HP 5	Provision/Administration of PH Programs							
HP 6	Health Administration and Insurance							
HP 8.1	Research Institutions							
HP 8.2	Education and Training Institutions							
Total	Estimated Expenditure (Rs. Million)	24,629	141,699	17,954	7,823	744,225	8,540	44,336

Identify and classify the following providers in the following questions. Place the expenditure estimates in appropriate cells of the HF X HP Table

Question One

The Ministry of Health and Family Welfare (MoHFW) spends:

1. Rs. 5100 million on teaching hospitals under central government. Out of the above, Rs. 3600 million is classified under urban health services, Rs 1200 million under education and training and the remainder on capital expenditure
2. Rs. 2500 for research. Of this Rs.1500 million is spent on research institutions under MoHFW, Rs. 500 million for research taken up by central government medical colleges and remainder by educational institutions in nonprofit sector.
3. The MoHFW allocates Rs. 14076 million to the Reproductive and Child Health (RCH) program. From this, Rs.8043 million is transferred to State Health Departments. The remainder is used by the ministry for provision and administration of RCH programs through various entities under the ministry. Of this, Rs. 226 million is for constructing new post-partum wards in central government hospitals and Rs. 420 million is for central government training institutions to provide training in sterilization surgeries.
4. The MoHFW allocates Rs. 12034 million to disease control programs. From this, Rs.7956 million is transferred to State Health Departments. The remainder is used by the ministry for provision and administration of disease control programs through various entities under the ministry. Of this, Rs. 800 million is for unspecified training institutions to preovide training in management of disease control programmes.
5. MoHFW spends Rs.1560 million on general administration of ministry, Rs.300 million on drug control administration and Rs.360 million on prevention of food adulteration.
6. Under various public-private partnerships the Ministry contracts NGOs to provide hospital services, maintain blood banks and implement public health programs. MoHFW allocates Rs. 1860 million to NGO hospitals, Rs 440 million to NGO blood banks and Rs. 2298 million to public health services provided by NGOs.

Question Two

The Departments of Health combined together spend:

1. Rs. 21234 million on CHCs and government hospitals, Rs. 28211 million on PHCs, Rs. 8243 million on dispensaries and Rs. 24567 million on allopathic teaching hospitals. The above funds include expenditure of Rs 1200 million,

Rs 1100 million and Rs. 1400 million for construction of government hospitals, PHCs and teaching hospitals respectively. The allocation to teaching hospitals include Rs. 9400 million earmarked for education and training.

2. Rs. 2456 million on AYUSH dispensaries and Rs. 3234 million on AYUSH teaching hospitals. The above funds also include Rs.130 million and Rs.240 million on construction of dispensaries and teaching hospitals respectively. The allocation to teaching hospitals include Rs. 940 million earmarked for education and training.
3. Rs. 8600 million on general administration, Rs. 324 million on drug control administration and Rs. 436 million on prevention of food adulteration.
4. Rs. 18400 million on RCH programs. Of this, Rs. 2100 million is spent on RCH training by various training institutions, Rs 1340 million on construction of subsidiary health centres, Rs. 2200 million on additional ANMs in subsidiary health centres.
5. Rs. 12800 million on disease control programs. Of this, Rs. 1400 is spent on training of staff by various training institutions and Rs. 920 million on additional staff in government hospitals.
6. Under various public-private partnerships the State Departments of Health contracts NGOs to provide hospital services, maintain ambulance services and implement public health programs. State Departments of Health allocates Rs. 3840 million to NGO hospitals, Rs 3440 million to ambulance services run by NGOs and Rs. 4298 million to public health services provided by NGOs.
7. Rs. 400 million on research institutions to carry out routine surveys related to availability and reach of health services.
8. Rs. 1216 million on nursing and paramedical colleges. Of this Rs. 300 million was spent on capital expenditure.

Question Three

The following expenditure was incurred by the Employees State Insurance Scheme:

1. Rs. 12300 million on ESI hospitals
2. Rs. 2100 million on ESI dispensaries
3. Rs. 170 million on construction of ESI hospitals
4. Rs. 80 million on construction of ESI dispensaries
5. Rs. 1900 million reimbursed to private hospitals for referral treatment
6. Rs. 1404 million on administration of scheme

Question Four

The companies under General Insurance Corporation collected premium of Rs. 7823 million towards medical insurance. The companies settled claims of Rs. 6100 million for treatment received by insured persons at private hospitals and incurred administrative expenses of Rs.1400 million.

Question Five

The table below show results of a national household survey and household spending in India for health care from various entities. To avoid double counting household expenditure on public hospitals and contributions to insurance are not included here as they have already been included under other financing agents

Provider	Rs. Million
Private Hospitals (Allopathic)	240125
Private Hospitals (ISM)	6105
NGO Hospitals	7849
Private Doctors	210412
Traditional Healers	86332
Diagnostic Laboratories	69349
Pharmacies	124053

Question Six

A national survey of NGO's estimated that NGO's as providers of health care accounted for health expenditure of Rs. 33065 million. Of this, Rs. 24525 million flowed to NGOs from other financing agents. NGOs themselves were the financing agents for remaining expenditure. Table below shows relative share of expenditure on various health functions. The estimate of total expenditure on each function and expenditure through other financing agents have been worked out. How will you allocate expenditure from NGO's as the financing agent to various provider classes?

Services	% Share of Expenditure	Expenditure by Financing Agent	
		Total	Other HF
Hospital Services	48	15871	13549
Ambulance/Blood Banks	11.73	3880	3880
Public Health Services	33.25	10994	6596
Research	1.51	500	500
Training	3.63	1200	
Capital Expenditure on Hospitals	1.88	620	
Total (Rs. Million)	100	33065	24525

Question Seven

A national survey estimated that public and private sector firms in India incurred a health expenditure of Rs. 57799 million. Of this, Rs. 13463 million was spend on contributions to various social insurance programmes. The remaining expenditure was shared equally on hospitals maintained by firms and reimbursement of expenses incurred for treatment at private hospitals.

Exercise Three: Filling the HF X HC Table

This exercise begins at a stage where health expenditure by key financing agents have been estimated. Fill the given FS X HC Table by disaggregating funds for health care functions from various financing agents

Worksheet for Case Study: HF X HC Table

ICHA Code	Health Care Functions (HC)	Financing Agent (HF)							
		HF 1.1.1.1	HF 1.1.2.1	HF 1.2.2	HF 2.1	HF 2.3	FS 2.3	HF2.5
		MoHFW	State Health Depts	ESIS	GIC	House holds	NGOs	Firms
HC.1	Services of curative care							
HC.4	Ancillary services to medical care							
HC.5	Medical goods dispensed to outpatients							
HC.6	Prevention and public health services							
HC.7.1.1	Government administration (except social security)							
HC.7.1.2	Administration of social security funds							
HC.7.2	Health administration/insurance: private							
HC.R.1	Capital formation							
HC.R.2	Education and training of health personnel							
HC.R.3	Research and development in health							
HC.R.4	Food, hygiene & drinking-water control							
Total	Estimated Expenditure (Rs. Million)	24,629	141,699	17,954	7,823	744,225	8,540	44,336

Identify and classify the health care functions in the following questions. Place the expenditure estimates in appropriate cells of the HF X HCTable

Question One

The Ministry of Health and Family Welfare (MoHFW) spends:

- Rs. 5100 million on teaching hospitals under central government. Out of the above, Rs. 3600 million is classified under urban health services, Rs 1200 million under education and training and the remainder on capital expenditure
- Rs. 2500 for research. Of this Rs.1500 million is spent on research institutions under MoHFW, Rs. 500 million for research taken up by central government medical colleges and remainder by educational institutions in nonprofit sector.
- The MoHFW allocates Rs. 14076 million to the Reproductive and Child Health (RCH) program. From this, Rs.8043 million is transferred to State Health Departments. The remainder is used by the ministry for provision and administration of RCH programs through various entities under the ministry. Of this, Rs. 226 million is for constructing new post-partum wards in central government hospitals and Rs. 420 million is for central government training institutions to provide training in sterilization surgeries.
- The MoHFW allocates Rs. 12034 million to disease control programs. From this, Rs.7956 million is transferred to State Health Departments. The remainder is used by the ministry for provision and administration of disease control programs through various entities under the ministry. Of this, Rs. 800 million is for unspecified training institutions to provide training in management of disease control programmes.
- MoHFW spends Rs.1560 million on general administration of ministry, Rs.300 million on drug control administration and Rs.360 million on prevention of food adulteration.
- Under various public-private partnerships the Ministry contracts NGOs to provide hospital services, maintain blood banks and implement public health programs. MoHFW allocates Rs. 1860 million to NGO hospitals, Rs 440 million to NGO blood banks and Rs. 2298 million to public health services provided by NGOs.

Question Two:

The Departments of Health combined together spend:

1. Rs. 21234 million on CHCs and government hospitals, Rs. 28211 million on PHCs, Rs. 8243 million on dispensaries and Rs. 24567 million on allopathic teaching hospitals. The above funds include expenditure of Rs 1200 million,

Rs 1100 million and Rs. 1400 million for construction of government hospitals, PHCs and teaching hospitals respectively. The allocation to teaching hospitals include Rs. 9400 million earmarked for education and training.

2. Rs. 2456 million on AYUSH dispensaries and Rs. 3234 million on AYUSH teaching hospitals. The above funds also include Rs.130 million and Rs.240 million on construction of dispensaries and teaching hospitals respectively. The allocation to teaching hospitals include Rs. 940 million earmarked for education and training.
3. Rs. 8600 million on general administration, Rs. 324 million on drug control administration and Rs. 436 million on prevention of food adulteration.
4. Rs. 18400 million on RCH programs. Of this, Rs. 2100 million is spent on RCH training by various training institutions, Rs 1340 million on construction of subsidiary health centres, Rs. 2200 million on additional ANMs in subsidiary health centres.
5. Rs. 12800 million on disease control programs. Of this, Rs. 1400 is spent on training of staff by various training institutions and Rs. 920 million on additional staff in government hospitals.
6. Under various public-private partnerships the State Departments of Health contracts NGOs to provide hospital services, maintain ambulance services and implement public health programs. State Departments of Health allocates Rs. 3840 million to NGO hospitals, Rs 3440 million to ambulance services run by NGOs and Rs. 4298 million to public health services provided by NGOs.
7. Rs. 400 million on research institutions to carry out routine surveys related to availability and reach of health services.
8. Rs. 1216 million on nursing and paramedical colleges. Of this Rs. 300 million was spent on capital expenditure.

Question Three:

The following expenditure was incurred by the Employees State Insurance Scheme:

1. Rs. 12300 million on ESI hospitals
2. Rs. 2100 million on ESI dispensaries
3. Rs. 170 million on construction of ESI hospitals
4. Rs. 80 million on construction of ESI dispensaries
5. Rs. 1900 million reimbursed to private hospitals for referral treatment
6. Rs. 1404 million on administration of scheme

Question Four

The companies under General Insurance Corporation collected premium of Rs. 7823 million towards medical insurance. The companies settled claims of Rs. 6100 million for treatment received by insured persons at private hospitals and incurred administrative expenses of Rs.1400 million.

Question Five

The table below show results of a national household survey and household spending in India for health care from various entities. To avoid double counting household expenditure on public hospitals and contributions to insurance are not included here as they have already been included under other financing agents. The survey indicates that 20% of the household expenditure has been on availing reproductive and child health services.

Provider	Rs. Million
Private Hospitals (Allopathic)	240125
Private Hospitals (ISM)	6105
NGO Hospitals	7849
Private Doctors	210412
Traditional Healers	86332
Diagnostic Laboratories	69349
Pharmacies	124053

Question Six

A national survey of NGO's estimated that NGO's as providers of health care accounted for health expenditure of Rs. 33065 million. Of this, Rs. 24525 million flowed to NGOs from other financing agents. NGOs themselves were the financing agents for remaining expenditure. Table below shows relative share of expenditure on various health functions. The estimate of total expenditure on each function and expenditure through other financing agents have been worked out. How will you allocate expenditure from NGO's as the financing agent to various functional classes?

Services	% Share of Expenditure	Expenditure by Financing Agent	
		Total	Other HF
Hospital Services	48	15871	13549
Ambulance/Blood Banks	11.73	3880	3880
Public Health Services	33.25	10994	6596
Research	1.51	500	500
Training	3.63	1200	
Capital Expenditure on Hospitals	1.88	620	
Total (Rs. Million)	100	33065	24525

Question Seven

A national survey estimated that public and private sector firms in India incurred a health expenditure of Rs. 57799 million. Of this, Rs. 13463 million was spend on contributions to various social insurance programmes. The remaining expenditure was shared equally on hospitals maintained by firms and reimbursement of expenses incurred for treatment at private hospitals.

ANSWER KEY FOR EXERCISES

Chapter Two Exercises

Question One

Based on the table given below, list the countries in ascending order i.e., from the lowest to highest, vis a viz

1. Government's role in providing health care to its population
2. Burden of out-of-pocket expenditures borne by households
3. Reliance on Donor Aid

Health Expenditure Indicators	India	China	UK	USA	South Africa
Government Expenditure on health as % Total Health Expenditure (THE)	17.9	37.2	82.2	44.4	41.4
Private expenditure on health as % of THE	82.1	62.8	17.8	55.6	58.6
External resources for health as % of THE	0.4	0.2	0	0	0.4
Out-of-pocket expenditure as % of private expenditure on health	100	95.4	55.3	26.5	22.1

Answer:

1. Government's role in providing health care to its population: India, China, South Africa, USA, and UK
2. Burden of out-of-pocket expenditures borne by households: UK, USA, South Africa, China and India
3. Reliance on Donor Aid: China, India and South Africa

Question Two

The Ministry of Finance, Government of India allocates Rs. 10,000 crore to the Ministry of Health and Family Welfare which in turn allocates Rs.1000 crore to one of its wings the National AIDS Control Organization (NACO). Rs. 50 crore is provided to the Tamil Nadu State AIDS Control Organization (TNSACS) by NACO. TNSACS also receives Rs. 10 crore grant from a bilateral agency. TNSACS provides grant of Rs. 10 crore to NGOs for conducting HIV prevention programmes, Rs.10 crore to government hospitals and Rs. 5 crore to private hospitals for providing treatment to HIV patients. From the above, list all the financing sources, financing agents, providers and functions.

Answer

The TNSACS is the financing agent as it manages funds received from multiple sources to pay multiple providers. Though TNSACS receives funds from the Ministry of Health and Family Welfare, the ultimate source of this fund is the Government of India. The other source is the bilateral agency which provides a grant. The providers here are NGOs which provide HIV prevention services and government hospitals which provide treatment services. Services provided by the providers are the functions. We will learn how to classify them in later chapters

Question Three

Four members of a household were covered by a health insurance policy paid for by the employer of the head of the household. One of the members fell ill and had to be hospitalized in a private hospital. The insurance company paid 80% of the hospital bill and the balance was paid directly to the hospital by the family. Identify the financing sources, financing agents, providers and functions mentioned above?

Answer

Here there are two financing agents who pay the provider which is the private hospital- the insurance company and the family. The household is the source of funds paid by the family. The other source of fund is the employer who paid the insurance policy. The function is hospitalized care.

Question Four

According to National Health Accounts of India, public expenditure accounts for 12.9% of the total health expenditure in Kerala compared to 30.4% in Rajasthan. Based on the NHA results can you make any inference regarding effectiveness of public expenditure on health in these States? Why?

Answer

No inference can be made regarding effectiveness of public expenditure based on NHA results alone. NHA results have to be combined with other non-financial data such as demographic information, disease prevalence rates and provider utilization rates to make an inference regarding effectiveness of public expenditure.

Chapter Three Exercises

Question One

Assume that you are developing NHA for India for the year 2005-06. All health and health related functions are included in the NHA. The fiscal year relates to the period between 1st April 2005 and 31st March 2006. Which of the following activities will you include in NHA? Justify your answers.

1. Health care provided by the Department of Home Affairs to inmates of jails.
2. Capacity building of RNTCP programme officers in computer skills
3. Noon meal scheme for primary school children
4. Regular monitoring of piped water supply for contamination by fecal bacteria.
5. Bednets purchased from a department store for protection against mosquito bites.
6. Insecticide treated bednets provided under the malaria control program
7. Physiotherapy recommended by the doctor for rehabilitation of a 60 year old man hospitalized with a stroke.
8. 'Overseas Mediclaim' (a health insurance) policy taken by a person who is a resident of Maharashtra while going for a short visit to Germany.
9. Treatment availed from a private hospital in India for gastroenteritis by a group of tourists from Spain
10. Treatment availed by a citizen of Maldives who is attending a 4 year residential academic programme in India .
11. Hospitalized treatment in a private hospital in February 2005.
12. Surgery underwent by a employee of a private firm in a corporate hospital in March 2006, bill of which was settled by the insurance company in May 2006.

Answer

1. Included. Inmates of jails are residents of the country hence health services provided to them are included in NHA.
2. Included. The primary purpose of capacity building of programme officers is to a health related function to improve program management and thereby population health
3. Not included. Though noon meal schemes have a bearing on health status, they are not primarily health programmes

4. Included. Monitoring of water supply is a health related function for prevention of water borne diseases
5. Not included. Though bednets prevent mosquito bites and hence mosquito borne diseases, primary purpose for purchase of bednets by individuals for a good nights' sleep is not considered as a measure for improvement of health per se.
6. Included. Bednets provided through a health programme satisfies primary purpose criteria.
7. Included. Primary purpose of physiotherapy is for rehabilitation and restoration of health.
8. Included. Though the insurance cover is for a person travelling outside the country, the expenditure on insurance is included as the person is ordinarily a resident of India.
9. Not included. Though treatment took place in India, expenditure incurred by tourists is not included in the health accounts for India as they are not ordinarily residents of India. This expenditure will be included in the NHA of Spain.
10. Included. Though not an Indian citizen, the student is a resident of India.
11. Not Included. The expenditure has taken place outside the specified time boundary of 1st April 2005 to 31st March 2006.
12. Included. Though bill was settled outside the time boundary, the actual expenditure took place within the specified time boundary

Question Two

In the aftermath of a severe flood a charitable organization sponsored by a private firm in India spends Rs. 9 crore in relief operations in 2005-06. Rs. 3 crores was spent on constructing dwellings, Rs. 2 crore on food aid, Rs. 1 crore on constructing sanitation facilities, Rs. 1 crore on constructing a hospital, Rs. 1 crore for operating expenses of the hospital, Rs. 50 lakhs on outreach work for malaria control and Rs. 50 lakhs on water quality surveillance to prevent gastroenteritis. Estimate total expenditure on health and health related functions incurred by the organization? Give reasons for including/excluding the above expenditures in the NHA.

Answer

1. Expenditure on construction of dwellings, food aid and construction of sanitation facilities fall outside the health expenditure boundary and hence not included in the health accounts.

2. Expenditure on construction of hospital, operating expenses of hospital, malaria control and water quality surveillance to prevent gastroenteritis will be included as they are either health or related functions.
3. Total health expenditure is Rs. 3 crore (1+1+0.5+0.5)

Question Three

In the year 2005-06, a hospital providing tertiary care services was provided a grant in aid of Rs. 2 crores by the State Government towards the cost of providing free treatment to poor patients. The State Government also provided 2 dialysis machines worth Rs. 1 crore to the hospital to cater to the increased patient load. In addition, the government reimbursed the hospital for providing health care services to government employees. The hospital provided health services costing Rs. 5 crore to government employees in 2005-06, of which Rs. 3 crore was reimbursed in the same year. In 2005-06 the government also reimbursed Rs. 1 crore which was due to the hospital for health care services provided to state government employees in 2004-05. Estimate total health expenditure for the year 2005-06 and give reasons for including/excluding any of the above expenditures in the NHA for 2005-06?

Answer

1. Expenditure on free treatment of poor patients (Rs. 2 crore), dialysis machines (Rs. 1 crore) and treatment of government employees treated in 2005-06 (Rs. 5 crore) will be included.
2. Though only Rs. 3 crore out of Rs. 5 crore expenditure incurred on government employees in 2005-06 has been reimbursed, the entire expenditure is included as it was incurred within the time boundary of 2005-06.
3. Though Rs. 1 crore incurred for treatment of government employees in 2004-05 was reimbursed in 2005-06, this expenditure is not included in health accounts of 2005-06 as the actual expenditure took place outside the specified time boundary.
4. Total health expenditure is therefore Rs. 8 crore (2+1+5)

Chapter Four Exercises

Question One

A patient undergoes surgery in a private hospital and is admitted for a week for post surgical care. He is billed by the hospital for operation theatre charges, doctor fees, nursing care charges, drugs and surgical consumables, room charges, diet charges and CT scan charges

Answer

All the above expenditure is included under HC.1.1 Inpatient Curative Care as all the above services have been provided in a hospital setting

Question Two

A patient seeks outpatient treatment from a private doctor's clinic. She is billed Rs. 50 for consultation and Rs.50 for drugs dispensed from the clinic. In addition she spends Rs.70 for an X-Ray prescribed by the doctor at a nearby diagnostic laboratory.

Answer

Expenditure for consultation is included under HC.1.3 Outpatient Curative Care. Expenditure on drugs is also included under HC. 1.3 as they are dispensed at the facility itself. Expenditure on X-Ray taken at an outside diagnostic facility is included under HC.4 Ancillary Services to Medical Care.

Question Three

A patient undergoes cataract surgery in a private hospital. He is provided spectacles and drugs by the hospital post operatively. Expenditure for these services is reimbursed by the government under the national blindness control programme.

Answer

The entire expenditure for the above services consultation is included under HC.6 Prevention and public health services, as they are provided under a national public health programme.

Question Four

A patient with continous cough and fever consults a private doctor. Doctor prescribes an X-ray and a sputum test from a nearby diagnostic centre. The test results indicate patient is suffering from tuberculosis. The doctor refers the patient to a government hospital where drugs are provided free of cost under the national tuberculosis programme. In addition doctor also prescribes a tonic which the patient purchases from a pharmacy.

Answer

Consultation fees is included under outpatient curative care (HC.1.3). Expenditure on X-ray and sputum test under ancillary services to medical care (HC.4). Since drugs for tuberculosis are provided under a public health program, expenditure on it is included under HC.6. Expenditure on tonic purchased from pharmacist is included under HC.5 medical goods dispensed to out-patients

Question Five

A district hospital spends Rs. 2 crore on salaries, drugs and other incidental expenses for fiscal year 2005-06. Rs.20 lakhs is spent on administration of hospital. In addition it also spends Rs. 1 crore in constructing a new inpatient ward. The hospital also receives Rs. 25 lakhs for providing free sterilization under the RCH program.

Answer

Expenditure on salaries, drugs and other incidental expenses for is included under Curative Care (HC.1). Expenditure on administration of hospital is also included under HC.1. Expenditure on construction of ward under Capital formation of health care providers (HCR. 1). Spending on sterilization is included under Maternal and Child Health; Family Planning and Counselling (HC.6.1)

Question Six

The Directorate of Medical Education of a State government spends Rs.300 crore in the year 2007-08. Of this, Rs. 10 crore is spent on direction and administration of the Directorate, Rs. 200 crore on provision of hospital services, 50 crores on medical education, Rs. 25 crores on construction of new hospital buildings and Rs.15 crores on construction of buildings for new nursing colleges

Answer

Expenditure on direction and administration is included under HC.7.1 General Government Administration of Health (HC.7.1); hospital services under curative care (HC.1); medical education under Education and Training of Health Personnel (HC.R.2) and construction of hospital buildings under Capital formation of health care providers (HCR. 1). Since construction of buildings for nursing college is for a health related function-medical education, expenditure on the same is included under the same function (HCR.2)

Question Seven

Facility surveys carried out annually by the health department for monitoring availability of services in hospitals

Answer

Since routine surveys are part of the information system supporting stewardship functions of the government, expenditure on these surveys should be included under General Government Administration of Health (HC.7.1)

Question Eight

Activities taken up by the health department to prevent food adulteration

Answer

HC.R.4 Food, Hygiene and Drinking Water Control

Question Nine

Training provided to doctors for improving skills in “No scalpel vasectomy” under the RCH program

Answer

Expenditure on training may be included under Education and Training of Health Personnel (HC.R.2) or may be shown as a sub category under HC.6 Prevention and public health services as they are provided for a public health program. A decision in this regard is to be taken by the NHA team depending on policy requirement.

Question Ten

Consider two scenarios wherein one child receives vaccination free of cost at a PHC under the RCH programme and the other child receives vaccination at a private hospital on payment for the service. How will you classify expenditure incurred in the above two scenarios.

Answer

In the first case, the expenditure is included under HC.6.3 Prevention of Communicable Diseases and in the second case, the expenditure is included under HC.1.3 outpatient curative care.

Chapter Five Exercises

In answering the questions in this chapter clarify:

- Who provided the services?- Provider
- Who paid the Provider?- Financing Agent
- Who provided funds to the Financing Agent? - Financing Source

Question One

The Directorate of Health of a State government implementing the 100% centrally sponsored Integrated Disease Control Program (IDSP). Funds for the same was provided by the central Ministry of Health and Family Welfare to the State Government vide the State Health Society

Answer

- Provider: Surveillance carried out by the Directorate of Health. This is a public health programme and hence classified under HP 5 Provision and Administration of Public Health Programmes.
- Financing Agent: The State Health Society which is an agency of the State Department of Health has provided the funds to the Directorate of Health and hence classified as HF 1.1.2.1 State Department of Health
- Source of Funds: Funds for the program has been provided by central government- FS. 1.1.1

Question Two

An employee of a public sector firm avails of hospital treatment at a private hospital. He pays the bill; 80% of which is reimbursed by his employer.

Answer

- Provider: HP 1.1.5 Private Hospitals
- Financing Agent: HF 2.3 Private households' out-of-pocket payment
- Source of Fund: FS 2.2 Household Fund and FS 2.1 Employer Funds

Question Three

The Employees State Insurance Scheme which provides medical benefits to insured persons is financed by mandatory employee and employer contributions determined by the government. In addition the State government also partly

finances the ESI scheme. A beneficiary under the scheme receives outpatient care from an ESI Hospital.

Answer

ESI is a social security scheme

- Provider: HP 1.1.3 Hospitals under Social Insurance
- Financing Agent: HF 1.2 Social Security Funds
- Source of Fund: FS 2.2 Household Fund, FS 2.1 Employer Funds and FS 1.1.2 State government funds

Question Four

A state government is implementing an emergency health transport scheme which is managed and operated by an NGO. Fifty percent of the operating expenses is met by the central government's National Rural Health Mission. 40% of the expenses is met by the state government. The balance is contributed by the NGO from its own resources.

Answer

- Provider: HP 3.9.1.4 Ambulances by NGOs/ Voluntary Agencies
- Financing Agent: Since this is a State government program, HF 1.1.2.1 State Department of Health
- Source of Fund: FS. 1.1.1 Central government funds, FS 1.1.2 State government funds and FS.2.3 NGO funds

Question Five

A private firm has subscribed to a Group Health Insurance scheme operated by New India Assurance Company, a public sector insurance company. 80% of the insurance premium is contributed by the firm and 20% by employees. An employee receives hospitalized treatment from a private hospital and the entire bill was settled by the insurance company directly.

Answer

- Provider: HP 1.1.5 Private Hospitals
- Financing Agent: HF 2.1 General Insurance Corporation (GIC)
- Source of Fund: FS 2.2 Household Fund, FS 2.1 Employer Funds

Question Six

The State AIDS Control Society (SACS) implements the National AIDS Control Program (NACP) in the State. The NACP is financed through a loan availed by the central government from the World Bank Funds and is routed to SACS through central Ministry of Health and Family Welfare. The SACS provides grants to state government medical colleges and charitable hospitals for providing treatment to HIV patients. SACS also contracts a research organization in the private sector to conduct a study on patient satisfaction related to HIV treatment at the aforesaid institutions.

Answer

- Provider: HP 1.1.2 Hospitals Owned by State Government, HP 1.1.6 Hospitals Owned by Charitable Institutions/NGOs (for treatment) and HP 8.1.2 Research Institutions by for Profit Private Sector (for research)
- Financing Agent: SACS which is a agency of State Department of Health- HF 1.1.2.1
- Source of Fund: Is a loan taken by central government from World Bank. Since this is a loan, it is incumbent on the Central Government to repay it and hence the source of fund is FS. 1.1.1 Central government funds

Question Seven

The Indian Council of Medical Research (ICMR), a department of the Ministry of Health and Family Welfare is sponsoring a central government nursing college for conducting research to develop guidelines for nursing practices to be followed in managing patients admitted with burns.

Answer

- Provider: HP 8.2.2.6 Education and Training Institutions by for Profit Private Sector
- Financing Agent: HF 1.1.1.1 Ministry of Health and Family Welfare
- Source of Fund: FS. 1.1.1 Central government funds

Question Eight

A family has enrolled in a health insurance plan offered by a private insurance agency by paying a premium of 10000 Rs. A member of the family had a medical emergency which was managed at a private hospital. The insurance company directly settled the bill with the private hospital.

Answer

- Provider: HP 1.1.5 Private Hospitals
- Financing Agent: HF 2.2 Private Insurance Companies
- Source of Fund: FS 2.2 Household Funds (Since pooling of funds occurs other sources such as employers may also be a source of fund)

Question Nine

The Department of Health of a state government is restructuring its secondary hospitals with a grant from DfID.

Answer

- Provider: HP 1.1.2 Hospitals Owned by State Government
- Financing Agent: HF 1.1.2.1 State Department of Health
- Source of Fund: FS.3 Rest of the World

Question Ten

A patient receives free treatment from a state government medical college. He however was required to purchase blood from a NGO run blood bank and medicines from a local pharmacy.

Answer

- Provider: HP 1.1.2 Hospitals Owned by State Government (free treatment); HP 3.9.2 Blood Bank (blood) and HP 4.1 Dispensing Chemists (medicines)
- Financing Agent: HF 1.1.2.1 State Department of Health (free treatment) and HF 2.3 Private households' out-of-pocket payment (blood and medicines)
- Source of Fund: FS 2.2 Household Fund (blood and medicines) and FS 1.1.2 State government funds (free treatment)

Chapter Seven Exercises

Question One

You are preparing State Health Accounts for your State for the year 2005-06. For estimating state government expenditure on health which budget documents will you use and for which year.

Answer

Detailed Demand for Grants of relevant State Departments for the year 2007-08 which gives actual expenditure for year 2005-06. Public Receipts for each department is available in the Receipts Budget. Receipts will have to be deducted along with GoI contribution and grants from external agencies from total expenditure to arrive at State Government contribution

Question Two

The State of Madhya Pradesh received a loan of Rs.100 crores from the World Bank towards developing first referral hospital services. The State has also availed a loan of Rs.40 crores from NABARD for constructing new primary health care centres. Under the National AIDS Control Program the State received a grant of Rs. 50 crores which has been financed by a World Bank loan. In addition the state also received a grant of Rs.50 crores from DfID as support for medium term health sector reforms. What entities are considered as source of funds for these loans and grants

Answer

The source of funds for loans received from World Bank and NABARD is the Government of Madhya Pradesh (FS.1.1.2) as it is repayable by the same. The source of funds for grant received under the centrally sponsored National AIDS Control Programme is Government of India (FS. 1.1.1) as it has to repay the loan taken from World Bank. DfID is a foreign government agency and a grant from it is considered as external aid (FS.3).

Question Three

The Department of Health and Family Welfare (DoHMFW) in Andhra Pradesh has launched a health insurance program for reimbursing expenditure incurred by BPL families on hospitalized care in tertiary care hospitals for selected critical illnesses. Premium for the same is paid to a private insurance company which manages the program and is budgeted in the demand for grants of the department. Identify the source of funds, financing agent and providers involved?

Answer

The source of funds is the Government of Andhra Pradesh (FS.1.1.2). Here there are two financing agents –DoHMFW and the Private Insurance Company. However in the sources to financing agent matrix funds will be shown as flowing from Government of AP to private insurance company (HF. 2.2). Two types of providers are involved -Hospitals (HP.1) and the Private Health Insurance Provider which incurs administrative expenses (HP 6.4.2). Hospitals will include those under central government (HP 1.1.1) and state government (HP.1.1.2); private hospitals (HP. 1.1.5); nonprofit hospitals (HP.1.1.6) and specialty hospitals (HP 1.3)

Question Four

Rs 1000 is paid to all BPL women who undergoes institutional delivery in Andhra Pradesh. Of this Rs.700 is paid under the centrally sponsored Janani Suraksha Yojana and Rs. 300 is paid under the State Sukhibhava scheme. About 500000 such deliveries were supported in 2006-07, funds for which was allocated to the Department of Health and Family Welfare. This money is given to meet expenses related to delivery and as an incentive for institutional delivery. Identify the source, financing agent, provider and function of this programme.

Answer

Source of funds for the programme is Government of India (FS.1.1.1) and Government of Andhra Pradesh (FS. 1.1.2). Here there are two financing agents– the Department of Health and Family Welfare and the Households. Though the Department of Health and Family Welfare is the Financing agent through which funds are routed, it is the households of the women that spend the money. Hence in the Source to Financing Agent matrix these funds will be depicted as a flow from the two sources to households (HF 2.3). Since the programme is meant for meeting expenses related to delivery the function is included under RCH and Family Planning Services (HC 6.1). The provider engaged by the households for such services is not known and hence included under HPnsk

Question Five

In the Demand for Grants of the Department of Health and Family Welfare, Government of Andhra Pradesh it was seen that out of the Rs.1500 crores spent in 2004-05, the following sources of funds were identified

1. Rs 200 crores under centrally sponsored disease control and family welfare programmes
2. Rs 100 crores loan from the World Bank under the APERP

3. Rs. 50 crores grant from the DfiD under the APHSRP
4. Rs. 100 crore loan from a public sector financial agency to start 2 new medical colleges

The receipts budget indicated that Government of Andhra Pradesh received Rs.26 crore from the ESIC as contribution to the ESIS and Rs.50 crore as payments from public for department' services. In addition Societies for disease prevention and family welfare of the department received Rs. 100 crores as direct transfer from MoHFW under centrally sponsored programmes and an in kind support of about Rs.50 crore . Estimate total expenditure of the Department of Health and Family Welfare and contribution of various sources of funds

Answer

Total Expenditure of the Department = Expenditure recorded in the Demand for Grants + Extra-budgetary support received. Therefore:

- Total Expenditure = Rs.1500 crores + Rs.100 crores+ Rs.50 crores = Rs. 1650 crores
- Government of India is the source of funds for Rs 350 crore (200 crore + 100 crore + 50 crore) provided under centrally sponsored programmes.
- Loans received from World Bank and Financial agencies are considered as own funds of the Government of Andhra Pradesh as it is the Government which ultimately pays for the services facilitated by these loans. Rs. 50 crore grant from DfID is an external aid.
- Government of AP contribution = Total expenditure- (GoI contribution + External Aid) = Rs 1650 crore- (350 crore + 50 crore) = Rs. 1250 crore
- However the Government of Andhra Pradesh has received payments of Rs. 76 crores (50 + 26) for services provided. This has to be deducted from estimate arrived above to arrive at actual contribution of Government of Andhra Pradesh i.e., Rs.1250 crore– Rs.76 crore= Rs.1174 crore
- Of the Rs. 76 crores received by Government of Andhra Pradesh Rs. 50 crore is from receipts for providing services. This is considered as contribution of households.
- Rs. 26 crore contributed by the ESIC includes contribution of both employees and employers in the ratio 1.75:4.75. Accordingly households contribute Rs. 8 crore and firms contribute Rs. 18 crore.

Estimate of Expenditure by Sources of Funds is therefore as follows

Sources	Rs. Crore
Government of Andhra Pradesh	1176
Government of India	350
External Aid	50
Households	56
Firms	18
Total	1650

Question Six

A municipality includes expenditure on the following items under the "public health" head of account. Which of the items fall within the health accounts boundary of the Indian NHA?

1. Hospital and dispensaries:
2. Control of epidemic and endemic diseases
3. Sanitation
4. Prevention of Food Adulteration
5. Maternity and Child Welfare,
6. Maintenance of burial and burning grounds
7. Fire Protection
8. Drainage

Answer

Items 1, 2, 4 and 5 fall under the health accounts boundary

Chapter Eight Exercises

Question One

Under which Financing Agent will you assign to the following insurance schemes

1. A community health insurance scheme operated by an NGO exclusively for women in self help groups who contribute to insurance premium
2. A contributory health insurance scheme of government employees operated by government
3. A Group Health Insurance scheme subscribed by a private firm from a public sector insurance company for its employees
4. A health insurance scheme for below poverty line population which is imposed, controlled, and financed by a government unit.

Answer

1. Since the programme is operated on behalf of a group and is restricted to group members it is private social health insurance (HF 2.1). However in Indian classification HF 2.1 refers to GIC companies. The classification needs to be appropriately modified to include such schemes
2. Technically insurance schemes for government employees are classified under private social health insurance. However in India they are classified as HF 1.2.1 Government Employee Insurance Schemes
3. Since this scheme is restricted to employees and there is contribution by employer this is a private social health insurance (HF 2.1).
4. This is a social security scheme HF 1.2.4 Other Social Security Funds

Question Two

The Employees State Insurance Corporation provided the following benefits to its enrollees. Expenditure on which of them will you include in NHA? Why?

1. Hospitalized Treatment in ESI hospitals
2. Outpatient Treatment in ESI dispensaries
3. Super- specialty treatment in empanelled hospitals
4. Sickness Benefit to compensate loss of wages during illness episodes
5. Maternity Benefit to compensate loss of wages during maternity leave
6. Disablement Benefit for disabled persons
7. Funeral Expenses

Answer

Expenditure on 1, 2 and 3 will be included under NHA as they fare services of curative care and fall within the NHA boundary. Other items are social security benefits outside NHA boundary

Question Three

The ESIC corporation spent Rs. 100 crores on providing medical benefits. Expenditure was met through contributions made by private employers and employees in the ratio of 4.75: 1.75. State governments provided Rs. 20 crore for operating expenses of ESI hospitals. What are the sources of funds for ESIC and estimate share of the different sources in the total health spending of ESIC

Answer

1. Sources of fund are employers, employees and State government
2. Of the total expenditureof Rs. 100 crore, Rs. 20 crore is contributed by State government. The remainder of Rs. 80 crore is contributed by employers and employees in the ratio of 4.75: 1.75, i.e., Rs 58.5 crores and Rs. 21.5 crors respectively

Question Four

A private insurance company collected Rs.10 crore in health insurance premiums and reimbursed claims of Rs. 7 crore for hospitalized treatment. In addition the company incurred administrative expenses of Rs.1 crore Which figures will you use in NHA and under what functions of care will you record the flow of funds through the insurance agency.

Answer

Total expenditure which includes reimbursement of claims and administrative expenses (7+1=8 crore) is less than premium collected. Hence difference between premium and claims reimbursed is considered as net cost of administration. Rs. 3 crore (10-7) is recorded as HC 7.2.2 health administration and health insurance: other private. Reimbursed claims of Rs. 7 crore is recorded under HC.1 services of curative care

Question Five

A private insurance company collected Rs.20 crore in health insurance premiums from households and reimbursed claims of Rs. 19 crore for hospitalized treatment. In addition the company incurred administrative expenses of Rs. 3

crore. Which figures will you use in NHA and under what sources and functions of care will you record the flow of funds through the insurance agency?

Answer

Total expenditure which includes reimbursement of claims and administrative expenses (19+3=22 crore) is more than premium collected. Here Rs. 2 crore is spent over and above premium collected from households. This additional expenditure is met from other funds of insurance hence source of funds of Rs. 2 crore is FS 2.4 other private funds. Rs. 20 crore contributed by households as premium is recorded under FS 2.2.

Administrative expenses of Rs. 3 crore is recorded as HC 7.2.2 health administration and health insurance: other private. Reimbursed claims of Rs. 19 crore is recorded under HC.1 services of curative care

Chapter Nine Exercises

Question One

Which of the following will you consider as a nonprofit agency in National Health Accounts for India? Why?

1. Charitable Hospital registered under Societies Act in Maharashtra
2. Bill and Melinda Gates Foundation
3. Tata Foundation
4. State AIDS Control Society
5. A US based international organizations having NGO status with the United Nations
6. A health research organization registered under the Trusts Act in Kerala
7. The Indian Red Cross Society

Answer

1. Included as it is a society registered in India and not organized by the government
2. Not included as it is an international organization which brings external funds to the country. It is a source of fund included under "Rest of the World"
3. Included as it is an Indian trust
4. Not included. Though legally a society, it is a government organized one and hence included as part of the State Department of Health
5. Not included. It is a source of fund included under "Rest of the World"
6. Included as it is a trust registered in India and not organized by the government
7. Included as it is a charitable society

Question Two

Expenditures on which of the following programmes undertaken by a NGO will you include in NHA? Specify under which functions of care will they be included.

1. HIV prevention programme
2. Noon meal programme for school children

3. Food supplementation given to below poverty line pregnant women
4. Watershed programme
5. Community Health Insurance for Self Help Group women for hospitalized treatment
6. Home for the elderly
7. Research on effectiveness of DOTS provider
8. Reimbursement of hospitalization expenses of NGO staff

Answer

1. Included under HC.6.3 Prevention of communicable diseases
2. Not included
3. Not included
4. Not included
5. Expenditure on services provided included under HC.1 Services of Curative Care and expenditure on administration under HC.7.2 Health administration and health insurance: private
6. Not included
7. Included under HC.R.3 Research and development in health
8. Included under HC.1 Services of Curative Care

Question Three

An NGO working in the health sector received Rs. 20 lakhs from Ministry of Health and Family Welfare, Rs. 10 lakhs from World Health Organization, Rs. 10 lakh from the Department for International Development (DfID) of the British government, Rs.10 lakhs from the World Bank and Rs. 25 lakh from Bill and Melinda Gates Foundation for delivering various health services. Which of these funds will be reported under FCRA requirements?

Answer

Only funds received from DfID and Bill and Melinda Gates Foundation will be reported under FCRA. Though WHO and World Bank are international organizations, they are part of the UN System and hence exempt from reporting under FCRA

Question Four

A survey of NGOs for the year 2005-06 report that 10% of annual health expenditure of NGOs in India was financed by international NGOs, 10% by bilateral agencies and 5% by multilateral agencies such as World Bank, UNICEF, WHO, UNDP etc., 20% by central government ministries, 10% by state government departments, 5% by donations from private enterprises, 10% by donations from Indian citizens and remainder by user fees collected from the general public. The "Annual Report, Receipt of Foreign Contribution by Voluntary Associations" for the year 2005-06 of the Foreign Contribution Regulatory Authority (FCRA), Ministry of Home Affairs report that NGOs in India received Rs. 100 crore for health care activities. Using the above information estimate total health spending by NGOs in 2005-06 and contribution of different sources.

Answer

Funds from international NGOs and Bilateral agencies are reported under FCRA. These account for 20% (10+10) of total expenditure which is Rs. 100 crore. Extrapolating from the above, total expenditure is Rs. 500 crore. Apply proportion of various sources to Rs. 500 crore to arrive at contribution of these sources.

Source	% Share	Amount (Rs. Crore)
International NGOs	10	50
Bilateral agencies	10	50
Multilateral agencies	5	25
Central government ministries	20	100
State government departments	10	50
Private enterprises	5	25
Donations from households	10	50
User charges paid by households	30	150
Total	100	500

Chapter Ten Exercises

Question One

One of the members of a household undergoes surgery at a private hospital. The household incurred an expenditure of Rs. 25000 on surgery fees, Rs. 10,000 on diagnostic tests, Rs. 3000 on medicines and Rs. 2000 on ambulance charges. Classify the above expenditure by functions of care?

Answer

All the expenditure has been incurred for the surgery done at a hospital. Hence all the expenditure is classified under HC. 6.1 Inpatient curative care.

Question Two

A patient seeks treatment from an allopathic private doctor as an outpatient. The doctor conducts a blood test of the patient in his clinic and dispenses some medicines to her. In addition, the doctor provides a prescription for a medicine to be purchased from an outside pharmacy. The patient spends Rs. 100 on doctors fees, Rs, 50 on drugs dispensed by the doctor, Rs. 50 for the blood test conducted in the clinic, and Rs. 100 on medicines purchased from the pharmacy. Classify these expenditures by functions of care and provider?

Answer

Expenditure on doctor's fees, blood test done at the clinic and drugs dispensed by the doctor (100+50+50) are functionally classified under HC. 1.3 Outpatient curative care and under HP 3.1.1 Physicians dealing with Allopathic System of Medicine in the provider classification. In case of drugs purchased from the pharmacy, the function is HC.5 Medical goods dispensed to outpatients and the provider is HP 4.1.1 Private Medical store Pharmacy (Allopathic System)

Question Three

An accident victim is brought to a private hospital in an ambulance. The doctor prescribes an X-ray from a nearby diagnostic centre. The X-ray reveals that the patient has a fracture. A minor surgical procedure is done to correct the fracture. Patient is immobilized with a cast and sent home the same day. The patient spent Rs. 2000 on hospital expenses, Rs. 500 for the ambulance and Rs. 200 on the X-ray? How will you classify these expenditures by function and provider?

Answer

Hospital expenses of Rs. 2000 is classified under HC.1.3 Outpatient curative care in case of function and in case of provider under HP 1.1.5 Private Hospitals. Expenditure on X-ray and ambulance (500+200) is classified under HC.4 ancillary services to medical care in case of function. Expenditure on ambulance services is classified under HP 3.9.1 Ambulance Services and that on X-ray under HP 3.5 Diagnostic Centres and Pathological labs in case of provider classification.

Question Four

An elderly man is paralyzed and requires nursing care. In the first year he is provided nursing care by his daughter at home. In the second year he is provided nursing care at home by a trained ANM hired from the Red Cross society. Under which functional and provider categories would you include the aforesaid services in NHA?

Answer

In the first year, nursing care was provided by a family member. Since no monetary transaction was involved, the services are not considered under NHA. In the second year services of an ANM was purchased. This expenditure is included under HP 3.6.2 Community/Domiciliary Nurse (NGO) in case of provider and under HC. 3.3 Long-term nursing care: home care in case of function.

Question Five

A man undergoes hospitalization in a private hospital. He paid Rs. 4500 for hospital expenses. This was later reimbursed by a private voluntary insurance scheme managed by a private sector insurance company which had provided him health insurance cover on payment of an yearly premium. How will you depict the flow of funds for the aforesaid transaction in the HF X HP table.

Answer

Since the expenditure was reimbursed by the insurance company, the financing agent here is classified as HF 2.2 Private Insurance Companies. The provider is a private hospital classified as HP 1.1.5. Funds are shown to flow from HF 2.2 to HP 1.1.5

Question Six

A woman delivers a child in a private hospital. She incurs an expenditure of Rs. 1500 on antenatal care, Rs. 12000 on delivery services and Rs. 2000 on postnatal care. Under which functions will you classify these expenditures?

Answer

All expenditures are classified under HC.1 Services of curative care as she has purchased these services from a provider.

Question Seven

From a household survey, expenditure on the following were estimated for a State. Estimate total expenditure of households as a source of funds for health care in the State.

Outpatient Care	Rs. 9800 million
Inpatient Care	Rs. 3200 million
Ancillary Care Services	Rs. 3600 million
Medical goods dispensed to outpatients	Rs. 4400 million
Reimbursement by employers	Rs. 1200 million
Reimbursement by private voluntary insurance	Rs. 800 million
Contribution to insurance premium	Rs. 1100 million

Answer

Total expenditure as a source of funds = Expenditure on functions + contribution to insurance- reimbursement =
{(9800+3200+3600+4400+1100)- (1200+800)}= 20100 million

Chapter Eleven

Exercise One

Question One

It is learnt that Ministry of Health and Family Welfare receives funds from four sources. Which cells can you fill up using the following information

- Rs. 40,521 million from central government
- Rs. 2000 million as loan from World Bank guaranteed by the GoI
- Rs. 9900 million as grant from bilateral/multilateral agencies
- Rs 482 million raised as fees for services
- Rs. 23, 696 million is provided as grant in aid to various State Departments of Health by the MoHFW
- Rs. 3494 million is provided as grant in aid to the Central Government Health Scheme
- Rs. 602 million is provided as grant in aid to NGOs

Answer

1. Since entities given grant in aid by MoHFW are responsible for management of funds they are the financing agents here. The MoHFW merely acts as a conduit for funds from the Ministry of Finance. These amounts are therefore deducted from MoHFW and shown as a transfer from central government to State Department of Health (Rs. 23,696 million), Government Employee Health Insurance (Rs.3,494 million) and NGOs (Rs. 602 million). Deducting these amounts from GoI contribution from MoHFW will give actual GoI funds managed by MoHFW (40521-(23696+3494+602)= 12729)
2. Since loan from World Bank guaranteed by GoI is also considered as central government funds, this is also added to central government contribution to MoHFW (12729 +2000 = 14729). Place 14729 in the Central Government X MoHFW cell
3. Grant from multilateral/bilateral agencies are external funds. Place 9900 in External Aid X MoHFW cell
4. Fees raised from services come from households. Place 482 in household X MoHFW cell

Question Two

Which cells can you fill up using the following information?

- All other ministries contribute Rs. 21,885 million towards health insurance schemes for its own employees. Households also contribute to central government employee insurance schemes.
- The Ministry of Finance contribute Rs. 327 towards a social security scheme for health care of Below Poverty Line population
- Rs. 2132 million was spend on health facilities maintained by other central ministries.
- Women and Child Welfare Ministry provides a grant in aid of Rs. 713 million to State Women and Child Welfare Departments for health care of under five children.

Answer

1. Contribution of central ministries to central government insurance schemes is shown as a transfer from central government to central government employee insurance. There is already Rs. 3494 million entered in the cell. Add Rs. 21,885 million to this to get Rs.25,379 million
2. Total funds flowing through central government health insurance schemes is Rs. 25, 797 million. Therefore household contribution (25,797-25,379) = Rs. 418 million. Place 418 in Household X central government employee insurance.
3. Contribution of Ministry of Finance, Rs 327 million is placed in the central government X other social security cell
4. Rs 713 million from Ministry of Women and Child Welfare is placed in the central government X Other State Departments cells
5. Rs. 2132 million spent on health facilities maintained by other central ministries is shown as a transfer from central government to other central ministries

Question Three

When the demand for grants of all the State Departments of Health in the year 2001-02 were compiled, a total of Rs. 157,834 million was found to have been spend on health through budgets of various State Departments of Health. This spending was financed through grants from central government, state government and external donors. State health departments received Rs. 9799 million from external donor agencies. State Departments of Health also raised extra budgetary funds of Rs. 4093 million from user fees. From the State government

contribution to the State Health Department budgets, the grants given below were routed. Which cells can you fill up using this information?

- Rs. 17, 287 million to local bodies for health
- Rs. 383 million to other State departments
- Rs. 984 million to NGOs
- Rs. 111 million paid by State Department of Health as premium for a health insurance for family planning acceptors, operated by a public sector insurance company.
- Rs. 327 million to social security funds

Answer

1. External aid of Rs. 9799 million is entered in external aid X state department of health cell. Contribution of Rs. 23696 from central government to State Department of Health is already entered previously
2. It is seen total budgetary funds to State Departments of Health is Rs 157,834. Contribution of State government to State Department of Health budget is arrived from {(157834- (23696 + 9799)= 124339}.
3. Budgetary contribution to State Health Departments, of Rs. 124,339 million arrived above also includes grants to agencies outside health departments. The Department of Health serves only as a conduit for funds. Enter 17287 in state government X local bodies, 383 in state government X other social security, 984 in state government X NGO, 111 in state government X GIC and 327 in state government X other social security funds.
4. Deducting the grants to various agencies from total of Rs. 124,339 million will give total amount of funds managed by the State Departments of Health. {124399- (17287 +383+984+111 +327)= 105111}. Enter this amount in the State government X State Department of Health cell
5. Households are the source of funds of user fees. Enter 4093 in the households X state department of health cell.

Question Four

After consolidation of expenditure data of departments other than health, in all the States it is found that a total of Rs. 10536 million was spend by other State departments. The other state departments receive funds from central and state governments. State government funds are used by departments to manage their own health facilities but bulk of the funds are spent on ESIS and State government employee insurance schemes. Rs. 5119 million and Rs. 3106 million were spent on State government employee insurance schemes and ESIS respectively. What cells can you fill using this information?

Answer

1. Contributions to ESIS and Government Employee Insurance Schemes are shown as contributions from state government to respective financing agents. Place 5119 in State government X State government employee insurance schemes cell and 3106 in State government X ESIS cell.
2. Funds operated by Other State Departments is arrived at by deducting ESIS and state government employee insurance contribution from total of Rs. 10536 million. {10546-(5119+3106)= 2311}
3. In the previous question it was found that central government has contributed Rs. 713 million to other State Departments. Deduct this from Rs. 2311 million arrived at above to get contribution of State government to other departments (2311-713= `1598)
4. Rs. 1598 million is the contribution of State Government to Other State Departments and has to be entered in the State Government X Other State Departments cell. It will be found that an entry of Rs. 383 million is already in the cell. This is contribution of Department of Health to Other Departments. Since the Rs. 1598 million arrived at above includes funds routed through Department of Health, replace 383 with 1598.

Question Five

It is found that spending of local bodies is funded by two sources- state government and own revenues of local bodies. Which cells can be filled with this information.

Answer

The total funds flowing through local bodies for health is given in the table (Rs. 31,784 million). While working out earlier questions it is known that State government had provided Rs. 17,287 million to local bodies. Therefore contribution from own resources can be estimated by deducting state government contribution from total of local bodies spending (31784- 17287= 14,497). Place 14,497 in Local Bodies X Local Bodies cell

Question Six

It is known that a total of Rs. 17,954 million was spent on health care activities by the ESIS. As seen earlier, state governments contributed Rs 3,106 million to the ESIS. The remainder is financed by the employer and employee contributions. Though the exact break up of employer and employee contributions is not known, it is learnt that contribution to ESIS premium is

shared between employees and employers in the ratio 27:73. Which cells can you fill up using this information.

Answer

1. The contributions from employers and employees put together is arrived by deducting state government contribution from total ESIS expenditure (27954-3106=14848)
2. The norm ratio of 27: 73 is used to divide Rs. 14,848 million between employee and employer contribution. Employee contribution = Rs. 4,009 million (14848*0.27) and Employer contribution = Rs. 10,839 million (14848*0.73)
3. Employee funds are household contributions. So place 4009 in the Households X ESIS cell
4. Employer funds are contributed by firms. So place 10,839 in the Firms X ESIS cells

Question Seven

A national survey of NGOs in India found that health care by NGOs was financed by a variety of sources. Relative contribution of each of the financing source to total NGO funds flowing through NGOs is given below. Pooling information from a number of official sources it is learnt that NGOs received Rs. 5148 million as grants and donations from outside the country. What cells can you fill up using this information.

Source of Funds for Health Care	Relative Share (%)
Grants from Central Government	3.7
Grants from State Government	4.16
Donations from Firms	0.5
Donations by Individuals	4.48
Grants and Donations from Outside the Country	25.5
Grants/Donations from NGOs	3.96
Fee for Health Care Services	57.7
Total	100

Answer

NGOs act as both financing agents and providers. As a provider, NGOs receive fees for services. The financing agents for fees received by NGOs are those who

paid for the services. NGOs act as a financing agent for grants and donations received by them as well as for use of funds generated by them for health care from other activities. In this case for 42.3% of total funds flowing through them (100- 57.7%), NGOs act as financing agents. Here it is known that Rs. 5148 million was received by NGOs as grants and donations from outside the country. This accounts for 25.5% of the NGO funds. Extrapolating from this, relative share from each of the source is worked out. It is seen that amount provided as grants from central and state governments to NGOs do not tally with official figures which has been already entered in the table. Since official figures reported by the government is likely to be more reliable than a survey which has a margin of error and is also subject to misclassification, the figures earlier entered are kept as such without change.

Source of Funds for Health Care	Relative Share (%)	Initial Estimate (Rs. Million)	Final Estimate (Rs. Million)
Grants from Central Government	3.7	747	**602**
Grants from State Government	4.16	840	**984**
Donations from Firms	.5	101	101
Donations by Individuals	4.48	905	905
Grants and donations from outside the country	25.5	**5148**	5148
Grants/Donations from NGOs	3.96	800	800

- Enter 5148 in External Aid X NGO cell
- Enter 101 in Firms X NGO cell
- Enter 905 in Households X NGO cell
- Enter 800 in NGO X NGO cell

Question Eight

A survey of public sector and private sector companies in the country indicated that firms contribute in different ways for health care of its employees. This includes contribution to ESIS, group health insurance, reimbursement of health care costs and maintenance of facilities. The actual contribution for health care through ESIS was not clearly identifiable from survey as contribution to ESIS included premium for other social security benefits outside health care benefits. Results of the survey showed that firms spent Rs. 44,336 million on managing their own facilities and providing reimbursement. In addition Rs. 2200 million and Rs. 207 million were contributed to public sector and private sector insurance companies towards premium for group health insurance. What cells can be filled up using this information.

Answer

Simple data entry. 44366 is entered in firms X firms, 2200 in firms X GIC and 207 in firms X other private insurance companies cell.

Question Nine

A survey of all insurance companies offering health insurance in the country was carried out. Public sector insurance companies received Rs. 2353 million and Rs. 5359 million as premium for group health insurance and individual health insurance schemes respectively. Private insurance companies received Rs. 170 million and Rs. 32 million as premium for group health insurance and individual health insurance schemes respectively. What cells can be filled up using this information.

Answer

Group health insurance figures from survey of insurance companies do not tally with that arising from survey of firms in the previous question. Since survey of insurance companies covered all companies providing insurance, figures obtained from the insurance companies is likely to be more reliable than a sample survey of firms which has a margin of error and is also subject to misclassification. Therefore , previously entered figures from survey of firms are replaced with figures from insurance companies.

- Replace 2200 in firms X GIC cell with 2343
- Replace 207 in firms X private insurance companies cell with 170
- Enter 5359 in households X GIC cell
- Enter 32 in households X private insurance companies cell

Question Ten

The OOP health expenditure has already been estimated and provided in the total column. Include this in the appropriate cell. The FS X HF cell is now ready. Before the table is finalized do a trial sum of the columns and see if it matches with the estimated sum of the rows given at the start of the exercise.

Answer

Rs. 759,523 million is entered in household X household OOP cell. The sum of columns exceeds estimated sum by Rs. 1482 million. The trial sum of rows for MoHFW and State Department of Health exceeds estimated sum by Rs. 482 million and Rs. 1000 million respectively

Question Eleven

On further investigation, it is it is found that Rs. 482 million raised as fees from households does not actually accrue into MoHFW account as they are directly paid into the Consolidated Fund of India. Similarly from user fees collected by State Departments of Health, Rs. 1000 million was directly paid into the Consolidated Fund of India. In both these cases, there has been double counting. How will the accounts be reconciled in light of this new information.

Answer

Since Rs. 482 million have accrued to the central government for provision of health care services, they are deducted from the budgetary contribution of the government and shown as contribution from the source which generated the funds. Hence Rs. 482 million is continued to be shown as a flow from households to MoHFW and the same amount is deducted from contribution of the central government to MoHFW. Accordingly, Rs. 14,247 million is now shown in the Central Government X MoHFW cell. Similarly deduct Rs 1000 million from Rs. 105111 in the State government X State Departments of Health cell. The row and column totals now tally and the HS X HF table is now finalized.

Question 1: Worked Out FS X HF Table

ICHA Code	Financing Agent (HF)	Financing Sources (FS)							Estimated Total (Rs. Million)
		FS 1.1.1 Central Govt	FS 1.1.2 State Govt	FS 1.1.3 PRIs & ULBs	FS 2.1 Firms	FS 2.2 House holds	FS 2.3 NGOs	FS 3 External Aid	
HF 1.1.1.1	MoHFW	14,729				482		9900	25,711
HF 1.1.1.2	Other Central Ministries								2,132
HF 1.1.2.1	State Department of Health	23,696							141,699
HF 1.1.2.2	Other State Departments								2,311
HF 1.1.3	Local Government								31,784
HF 1.2.1.1	Central Govt Employee Insurance	3,494							25,797
HF 1.2.1.1	State Govt Employee Insurance								5119
HF 1.2.2	ESIS								17,954
HF 1.2.4	Other Social Security Funds								790
HF 2.1	GIC								7,823
HF 2.2	Private Insurance Companies								202
HF 2.3	Household' OOP Payment								744,225
HF 2.4	NGOs	602							8,540
HF 2.5	Firms and Corporations								44,336
Trial Sum	Total Expenditure (Rs. Million)	42,521				482		9900	1,057,341

Question 2: Worked Out FS X HF Table

ICHA Code	Financing Agent (HF)	Financing Sources (FS)							Estimated Total (Rs. Million)
		FS 1.1.1 Central Govt	FS 1.1.2 State Govt	FS 1.1.3 PRIs & ULBs	FS 2.1 Firms	FS 2.2 House holds	FS 2.3 NGOs	FS 3 External Aid	
HF 1.1.1.1	MoHFW	14,729				482		9,900	24,629
HF 1.1.1.2	Other Central Ministries	2,132							2,132
HF 1.1.2.1	State Department of Health	23,696							141,699
HF 1.1.2.2	Other State Departments	713							2,311
HF 1.1.3	Local Government								31,784
HF 1.2.1.1	Central Govt Employee Insurance	25,379				418			25,797
HF 1.2.1.1	State Govt Employee Insurance								5,119
HF 1.2.2	ESIS								17,954
HF 1.2.4	Other Social Security Funds	327							790
HF 2.1	GIC								7,823
HF 2.2	Private Insurance Companies								202
HF 2.3	Household' OOP Payment								744,225
HF 2.4	NGOs	602							8,540
HF 2.5	Firms and Corporations								44,336
Trial Sum	Total Expenditure (Rs. Million)	67,578				900		9,900	1,057,341

Question 3: Worked Out FS X HF Table

ICHA Code	Financing Agent (HF)	Financing Sources (FS)							Estimated Total (Rs. Million)
		FS 1.1.1	FS 1.1.2	FS 1.1.3	FS 2.1	FS 2.2	FS 2.3	FS 3	
		Central Govt	State Govt	PRIs & ULBs	Firms	House holds	NGOs	External Aid	
HF 1.1.1.1	MoHFW	14,729				482		9,900	24,629
HF 1.1.1.2	Other Central Ministries	2,132							2,132
HF 1.1.2.1	State Department of Health	23,696	105,111			4,093		9,799	141,699
HF 1.1.2.2	Other State Departments	713	383						2,311
HF 1.1.3	Local Government		17,287						31,784
HF 1.2.1.1	Central Govt Employee Insurance	25,379	463			418			25,797
HF 1.2.1.1	State Govt Employee Insurance								5,119
HF 1.2.2	ESIC								17,954
HF 1.2.4	Other Social Security Funds	327	463						790
HF 2.1	GIC		111						7,823
HF 2.2	Private Insurance Companies								202
HF 2.3	Household' OOP Payment								744,225
HF 2.4	NGOs	602	984						8,540
HF 2.5	Firms and Corporations								44,336
Trial Sum	Total Expenditure (Rs. Million)	67,578	124,339			4,993		19,699	1,057,341

Question 4: Worked Out FS X HF Table

ICHA Code	Financing Agent (HF)	Financing Sources (FS)							Estimated Total (Rs. Million)
		FS 1.1.1 Central Govt	FS 1.1.2 State Govt	FS 1.1.3 PRIs & ULBs	FS 2.1 Firms	FS 2.2 House holds	FS 2.3 NGOs	FS 3 External Aid	
HF 1.1.1.1	MoHFW	14,729				482		9,900	24,629
HF 1.1.1.2	Other Central Ministries	2,132							2,132
HF 1.1.2.1	State Department of Health	23,696	105,111			4,093		9,799	141,699
HF 1.1.2.2	Other State Departments	713	1,598						2,311
HF 1.1.3	Local Government		17,287						31,784
HF 1.2.1.1	Central Govt Employee Insurance	25,379	463			418			25,797
HF 1.2.1.1	State Govt Employee Insurance		5,119						5,119
HF 1.2.2	ESIS		3,106						17,954
HF 1.2.4	Other Social Security Funds	327	463						790
HF 2.1	GIC		111						7,823
HF 2.2	Private Insurance Companies								202
HF 2.3	Household' OOP Payment								744,225
HF 2.4	NGOs	602	984						8,540
HF 2.5	Firms and Corporations								44,336
Trial Sum	Total Expenditure (Rs. Million)	67,578	133,779			4,993		19,699	1,057,341

Question 5: Worked Out FS X HF Table

ICHA Code	Financing Agent (HF)	Financing Sources (FS)						Estimated Total (Rs. Million)
		FS 1.1.1	FS 1.1.2	FS 1.1.3	FS 2.1	FS 2.2	FS 2.3	FS 3	
		Central Govt	State Govt	PRIs & ULBs	Firms	House holds	NGOs	External Aid	
HF 1.1.1.1	MoHFW	14,729				482		9,900	24,629
HF 1.1.1.2	Other Central Ministries	2,132							2,132
HF 1.1.2.1	State Department of Health	23,696	105,111			4,093		9,799	141,699
HF 1.1.2.2	Other State Departments	713	1,598						2,311
HF 1.1.3	Local Government		17,287	14,497					31,784
HF 1.2.1.1	Central Govt Employee Insurance	25,379	463			418			25,797
HF 1.2.1.1	State Govt Employee Insurance		5,119						5,119
HF 1.2.2	ESIS		3,106						17,954
HF 1.2.4	Other Social Security Funds	327	463						790
HF 2.1	GIC		111						7,823
HF 2.2	Private Insurance Companies								202
HF 2.3	Household' OOP Payment								744,225
HF 2.4	NGOs	602	984						8,540
HF 2.5	Firms and Corporations								44,336
Trial Sum	Total Expenditure (Rs. Million)	67,578	133,779	14,497		4,993		19,699	1,057,341

Question 6: Worked Out FS X HF Table

ICHA Code	Financing Agent (HF)	Financing Sources (FS)						Estimated Total (Rs. Million)
		FS 1.1.1 Central Govt	FS 1.1.2 State Govt	FS 1.1.3 PRIs & ULBs	FS 2.1 Firms	FS 2.2 House holds	FS 2.3 NGOs	FS 3 External Aid	
HF 1.1.1.1	MoHFW	14,729				482		9,900	24,629
HF 1.1.1.2	Other Central Ministries	2,132							2,132
HF 1.1.2.1	State Department of Health	23,696	105,111			4,093		9,799	141,699
HF 1.1.2.2	Other State Departments	713	1,598						2,311
HF 1.1.3	Local Government		17,287	14,497					31,784
HF 1.2.1.1	Central Govt Employee Insurance	25,379	463			418			25,797
HF 1.2.1.1	State Govt Employee Insurance		5,119						5,119
HF 1.2.2	ESIS		3,106		10,839	4,009			17,954
HF 1.2.4	Other Social Security Funds	327	463						790
HF 2.1	GIC		111						7,823
HF 2.2	Private Insurance Companies								202
HF 2.3	Household' OOP Payment								744,225
HF 2.4	NGOs	602	984						8,540
HF 2.5	Firms and Corporations								44,336
Trial Sum	Total Expenditure (Rs. Million)	67,578	133,779	14,497	10,839	9,002		19,699	1,057,341

Question 7: Worked Out FS X HF Table

ICHA Code	Financing Agent (HF)	Financing Sources (FS)						Estimated Total (Rs. Million)
		FS 1.1.1	FS 1.1.2	FS 1.1.3	FS 2.1	FS 2.2	FS 2.3	FS 3	
		Central Govt	State Govt	PRIs & ULBs	Firms	House holds	NGOs	External Aid	
HF 1.1.1.1	MoHFW	14,729				482		9,900	24,629
HF 1.1.1.2	Other Central Ministries	2,132							2,132
HF 1.1.2.1	State Department of Health	23,696	105,111			4,093		9,799	141,699
HF 1.1.2.2	Other State Departments	713	1,598						2,311
HF 1.1.3	Local Government		17,287	14,497					31,784
HF 1.2.1.1	Central Govt Employee Insurance	25,379	463			418			25,797
HF 1.2.1.1	State Govt Employee Insurance		5,119						5,119
HF 1.2.2	ESIS		3,106		10,839	4,009			17,954
HF 1.2.4	Other Social Security Funds	327	463						790
HF 2.1	GIC		111						7,823
HF 2.2	Private Insurance Companies								202
HF 2.3	Household' OOP Payment								744,225
HF 2.4	NGOs	602	984		101	905	800	5,148	8,540
HF 2.5	Firms and Corporations								44,336
Trial Sum	Total Expenditure (Rs. Million)	67,578	133,779	14,497	10,940	9,907	800	24,847	1,057,341

Question 8: Worked Out FS X HF Table

ICHA Code	Financing Agent (HF)	Financing Sources (FS)							Estimated Total (Rs. Million)
		FS 1.1.1 Central Govt	FS 1.1.2 State Govt	FS 1.1.3 PRIs & ULBs	FS 2.1 Firms	FS 2.2 House holds	FS 2.3 NGOs	FS 3 External Aid	
HF 1.1.1.1	MoHFW	14,729				482		9,900	24,629
HF 1.1.1.2	Other Central Ministries	2,132							2,132
HF 1.1.2.1	State Department of Health	23,696	105,111			4,093		9,799	141,699
HF 1.1.2.2	Other State Departments	713	1,598						2,311
HF 1.1.3	Local Government		17,287	14,497					31,784
HF 1.2.1.1	Central Govt Employee Insurance	25,379	463			418			25,797
HF 1.2.1.1	State Govt Employee Insurance		5,119						5,119
HF 1.2.2	ESIS		3,106		10,839	4,009			17,954
HF 1.2.4	Other Social Security Funds	327	463						790
HF 2.1	GIC		111		2,200				7,823
HF 2.2	Private Insurance Companies				207				202
HF 2.3	Household' OOP Payment								744,225
HF 2.4	NGOs	602	984		101	905	800	5,148	8,540
HF 2.5	Firms and Corporations				44,336				44,336
Trial Sum	Total Expenditure (Rs. Million)	67,578	133,779	14,497	57,683	9,907	800	24,847	1,057,341

Question 9: Worked Out FS X HF Table

ICHA Code	Financing Agent (HF)	Financing Sources (FS)							Estimated Total (Rs. Million)
		FS 1.1.1	FS 1.1.2	FS 1.1.3	FS 2.1	FS 2.2	FS 2.3	FS 3	
		Central Govt	State Govt	PRIs & ULBs	Firms	House holds	NGOs	External Aid	
HF 1.1.1.1	MoHFW	14,729				482		9,900	24,629
HF 1.1.1.2	Other Central Ministries	2,132							2,132
HF 1.1.2.1	State Department of Health	23,696	105,111			4,093		9,799	141,699
HF 1.1.2.2	Other State Departments	713	1,598						2,311
HF 1.1.3	Local Government		17,287	14,497					31,784
HF 1.2.1.1	Central Govt Employee Insurance	25,379	463			418			25,797
HF 1.2.1.1	State Govt Employee Insurance		5,119						5,119
HF 1.2.2	ESIS		3,106		10,839	4,009			17,954
HF 1.2.4	Other Social Security Funds	327	463						790
HF 2.1	GIC		111		2,353	5,359			7,823
HF 2.2	Private Insurance Companies				170	32			202
HF 2.3	Household' OOP Payment								744,225
HF 2.4	NGOs	602	984		101	905	800	5,148	8,540
HF 2.5	Firms and Corporations				44,336				44,336
Trial Sum	Total Expenditure (Rs. Million)	67,578	133,779	14,497	57,799	15,298	800	24,847	1,057,341

Question 10: Worked Out FS X HF Table

ICHA Code	Financing Agent (HF)	Financing Sources (FS)							Estimated Total (Rs. Million)	Trial Sum (Rs. Million)
		FS 1.1.1	FS 1.1.2	FS 1.1.3	FS 2.1	FS 2.2	FS 2.3	FS 3		
		Central Govt	State Govt	PRIs & ULBs	Firms	House holds	NGOs	External Aid		
HF 1.1.1.1	MoHFW	14,729				482		9,900	24,629	25,111
HF 1.1.1.2	Other Central Ministries	2,132							2,132	2,132
HF 1.1.2.1	State Department of Health	23,696	105,111			4,093		9,799	141,699	142,699
HF 1.1.2.2	Other State Departments	713	1,598						2,311	2,311
HF 1.1.3	Local Government		17,287	14,497					31,784	31,784
HF 1.2.1.1	Central Govt Employee Insurance	25,379	463			418			25,797	25,797
HF 1.2.1.1	State Govt Employee Insurance		5,119						5,119	5,119
HF 1.2.2	ESIS		3,106		10,839	4,009			17,954	17,954
HF 1.2.4	Other Social Security Funds	327	463						790	790
HF 2.1	GIC		111		2,353	5,359			7,823	7,823
HF 2.2	Private Insurance Companies				170	32			202	202
HF 2.3	Household' OOP Payment					744,225			744,225	744,225
HF 2.4	NGOs	602	984		101	905	800	5,148	8,540	8,540
HF 2.5	Firms and Corporations				44,336				44,336	44,336
Trial Sum	Total Expenditure (Rs. Million)	67,578	133,779	14,497	57,799	759,523	800	24,847	1,057,341	1,058,823

Question 11: Worked Out FS X HF Table

ICHA Code	Financing Agent (HF)	Financing Sources (FS)							Estimated Total (Rs. Million)	Trial Sum (Rs. Million)
		FS 1.1.1	FS 1.1.2	FS 1.1.3	FS 2.1	FS 2.2	FS 2.3	FS 3		
		Central Govt	State Govt	PRIs & ULBs	Firms	House holds	NGOs	External Aid		
HF 1.1.1.1	MoHFW	14,247				482		9,900	24,629	24,629
HF 1.1.1.2	Other Central Ministries	2,132							2,132	2,132
HF 1.1.2.1	State Department of Health	23,696	104,111			4,093		9,799	141,699	141,699
HF 1.1.2.2	Other State Departments	713	1,598						2,311	2,311
HF 1.1.3	Local Government	0	17,287	14,497					31,784	31,784
HF 1.2.1.1	Central Govt Employee Insurance	25,379	463			418			25,797	25,797
HF 1.2.1.1	State Govt Employee Insurance	0	5,119						5,119	5,119
HF 1.2.2	ESIS	0	3,106		10,839	4,009			17,954	17,954
HF 1.2.4	Other Social Security Funds	327	463						790	790
HF 2.1	GIC	0	111		2,353	5,359			7,823	7,823
HF 2.2	Private Insurance Companies	0			170	32			202	202
HF 2.3	Household' OOP Payment	0	0			744,225			744,225	744,225
HF 2.4	NGOs	602	984		101	905	800	5,148	8,540	8,540
HF 2.5	Firms and Corporations	0	0		44,336				44,336	44,336
NHE	Trial Sum (Rs. Million)	67,096	132,779	14,497	57,799	759,523	800	24,847	1,057,341	1,057,341

Exercise Two

Question One

The Ministry of Health and Family Welfare (MoHFW) spends:

1. Rs. 5100 million on teaching hospitals under central government. Out of the above, Rs. 3600 million is classified under urban health services, Rs 1200 million under education and training and the remainder on capital expenditure
2. Rs. 2500 for research. Of this Rs.1500 million is spent on research institutions under MoHFW, Rs. 500 million for research taken up by central government medical colleges and remainder by educational institutions in nonprofit sector.
3. The MoHFW allocates Rs. 14076 million to the Reproductive and Child Health (RCH) program. From this, Rs.8043 million is transferred to State Health Departments. The remainder is used by the ministry for provision and administration of RCH programs through various entities under the ministry. Of this, Rs. 226 million is for constructing new post-partum wards in central government hospitals and Rs. 420 million is for central government training institutions to provide training in sterilization surgeries.
4. The MoHFW allocates Rs. 12034 million to disease control programs. From this, Rs.7956 million is transferred to State Health Departments. The remainder is used by the ministry for provision and administration of disease control programs through various entities under the ministry. Of this, Rs. 800 million is for unspecified training institutions to provide training in management of disease control programmes.
5. MoHFW spends Rs.1560 million on general administration of ministry, Rs.300 million on drug control administration and Rs.360 million on prevention of food adulteration.
6. Under various public-private partnerships the Ministry contracts NGOs to provide hospital services, maintain blood banks and implement public health programs. MoHFW allocates Rs. 1860 million to NGO hospitals, Rs 440 million to NGO blood banks and Rs. 2398 million to public health services provided by NGOs.

Answer

1. Teaching hospitals are by convention classified under hospitals rather than educational institutions. Teaching Hospitals under Central Government are classified as HP 1.1.1 Central Government Hospitals. Place Rs. 5100 million in the HF 1.1.1.1 X HP 1.1.1 cell.

2. Research institutions under MoHFW are classified as HP 8.1.1 Health Research Institutions in Public Sector. Teaching Hospitals under Central Government are classified as HP 1.1.1 Central Government Hospitals. Educational institutions in the nonprofit sector are classified as HP 8.2.1.4 Education and Training Institutions by Charitable Institutions. Add Rs. 1500 million in HF 1.1.1.1 X HP 8.1 cell, Rs. 500 million in HF 1.1.1.1 X HP 1.1.1 cell and Rs. 500 million {2500-(1500+500)} in the HF 1.1.1.1 X HP 8.2 cell.
3. State Health Departments are the financing agents for the Rs.8043 million transferred to them. MoHFW is financing agent for Rs. 6033 million {14076-8043). Of this 226 is spend on HP 1.1.1 Central Government Hospitals and Rs.420 million is spend on HP 8.2 Education and Training Institutions. The remainder {6033- (420+226) = 5387)} is spend on HP 5 Provision and Administration of Public Health Programmes. Add 226 in the HF 1.1.1.1 X HP 1.1.1 cell; 420 in the HF 1.1.1.1 X HP 8.2 cell and 5387 in ths HF 1.1.1.1 X HP 5 cell.
4. State Health Departments are the financing agents for the Rs.7956 million transferred to them. MoHFW is financing agent for Rs. 4078 million {12034-7956). Of this Rs. 800 million is spent on HP 8.2 Educational and Training Institutions. The remainder (4078-800=3278) is spend on HP 5 Provision and Administration of Public Health Programmes. Add 800 in the HF 1.1.1.1 X HP 8.2 cell and 3278 in the HF 1.1.1.1 X HP 5 cell.
5. HP 6.1.1 Health Administration by Central Government is the provider for general administration of ministry, drug control administration and prevention of food adulteration. Add Rs 2220 million (1560+ 300+360) to HF 1.1.1.1 X HP 6 cell
6. NGO hospitals are classified as HP 1.1.7 Charitable Hospitals, Blood Banks under HP 3.9.2 and public health services provided by NGOs under HP.5 Provision and Administration of Public Health Programs. Add Rs. 1860 million in HF 1.1.1.1 X HP 1.1.7 cell, Rs 440 million in HF 1.1.1.1 X HP 3 cell and Rs. 2298 million in HF 1.1.1.1 X HP 5 cell.

Question Two:

The Departments of Health combined together spend:

1. Rs. 21234 million on CHCs and government hospitals, Rs. 28211 million on PHCs, Rs. 8243 million on dispensaries and Rs. 24567 million on allopathic teaching hospitals. The above funds include expenditure of Rs 1200 million, Rs 1100 million and Rs. 1400 million for construction of government hospitals, PHCs and teaching hospitals respectively. The allocation to teaching hospitals include Rs. 9400 million earmarked for education and training.

2. Rs. 2456 million on AYUSH dispensaries and Rs. 3234 million on AYUSH teaching hospitals. The above funds also include Rs.130 million and Rs.240 million on construction of dispensaries and teaching hospitals respectively. The allocation to teaching hospitals include Rs. 940 million earmarked for education and training.
3. Rs. 8600 million on general administration, Rs. 324 million on drug control administration and Rs. 436 million on prevention of food adulteration.
4. Rs. 18400 million on RCH programs. Of this, Rs. 2100 million is spent on RCH training by various training institutions, Rs 1340 million on construction of subsidiary health centres, Rs. 2200 million on additional ANMs in subsidiary health centres.
5. Rs. 12800 million on disease control programs. Of this, Rs. 1400 is spent on training of staff by various training institutions and Rs. 920 million on additional staff in government hospitals.
6. Under various public-private partnerships the State Departments of Health contracts NGOs to provide hospital services, maintain ambulance services and implement public health programs. State Departments of Health allocates Rs. 3840 million to NGO hospitals, Rs 3440 million to ambulance services run by NGOs and Rs. 4298 million to public health services provided by NGOs.
7. Rs. 400 million on research institutions to carry out routine surveys related to availability and reach of health services.
8. Rs. 1216 million on nursing and paramedical colleges. Of this Rs. 300 million was spent on capital expenditure

Answer

1. CHCs, government hospitals, PHCs and teaching hospitals are all classified as HP1.1.2 State Government Hospitals. Dispensaries are classified under HP.3 Providers of Ambulatory Health Care. Place Rs. 74012 million (21234+28211+24567) in HF 1.1.2.1 X HP 1.1.2 cell and Rs. 8243 million in HF 1.1.2.1 X HP 3 cell.
2. Expenditure on AYUSH hospitals is classified under HP.1.4 ISM Hospitals and that on AYUSH dispensaries under HP.3 Providers of Ambulatory Care. Add 3234 in HF 1.1.2.1 X HP 1.4 cell and 2456 in HF 1.1.2.1 X HP 3 cell.
3. HP 6.1.2 Health Administration by State Government is the provider for general administration of ministry, drug control administration and prevention of food adulteration. Add Rs 2220 million (8600+324+436) to HF 1.1.2.1 X HP 6 cell.
4. Expenditure on RCH programs excluding specific allocation to other providers are classified under HP. 5 Provision and Administration of Public

Health Programs. Allocation to subsidiary health centres is classified under HP.3 Providers of Ambulatory Care and that to training institutions under HP 8.2 Educational and Training Institutions. Add Rs. 12760 million {18400-(2100+1340+2200)} in HF 1.1.2.1 X HP 5 cell; Rs. 2100 million in HF 1.1.2.1 X HP 8.2 cell; and 2540 (1340+2200) in HF 1.1.2.1 X HP 3 cell.

5. Expenditure on disease control programs excluding specific allocation to other providers are classified under HP. 5 Provision and Administration of Public Health Programs. Allocation to government hospitals is classified under HP 1.1.2 and to training institutions under HP 8.2. Add Rs. million {12800- (1400+920)} in HF 1.1.2.1 X HP 5 cell; Rs. 1400 million in HF 1.1.2.1 X HP 8.2 cell; and Rs. 920 million in HF 1.1.2.1 X HP 1.1.2 cell
6. NGO hospitals are classified as HP 1.1.7 Charitable Hospitals, ambulance services under HP 3.9.1 and public health services provided by NGOs under HP 5 Provision and Administration of Public Health Programs. Add Rs. 3840 million in HF 1.1.2.1 X HP 1.1.7 cell, Rs 3440 million in HF 1.1.2.1 X HP 3 cell and Rs. 4298 million in HF 1.1.2.1 X HP 5 cell.
7. Training Institutions are classified under HP 8.2 Educational and Training Institutions. Add Rs.400 million in HF 1.1.2.1 X HP 8.2 cell
8. Nursing and paramedical colleges are classified under HP 8.2 Educational and Training Institutions. Add Rs. 1216 million in HF 1.1.2.1 X HP 8.2 cell.

Question Three:

The following expenditure was incurred by the Employees State Insurance Scheme:

1. Rs. 12300 million on ESI hospitals
2. Rs. 2100 million on ESI dispensaries
3. Rs. 170 million on construction of ESI hospitals
4. Rs. 80 million on construction of ESI dispensaries
5. Rs. 1900 million reimbursed to private hospitals for referral treatment
6. Rs. 1404 million on administration of scheme

Answer

1. Expenditure on ESI hospitals is classified under HP 1.1.4 Hospitals under Social Insurance. Place Rs. 12470 million (12300+170) in HF 1.2.2 X HP 1.1.4 cell

2. Expenditure on ESI dispensaries is classified under HP.3 Providers of Ambulatory Health Care. Place Rs.2180 million (2100+80) in HF 1.2.2 X HP3 cell
3. Expenditure reimbursed to private hospitals is classified under HP 1.1.6 Private Hospitals. Place Rs. 1900 million in HF 1.2.2 X HP 1.1.6 cell
4. Expenditure on administration of scheme is classified under HP 6 Health Administration and Insurance. Place Rs. 1404 million in HF 1.2.2 X HP 6 cell.

Question Four

The companies under General Insurance Corporation collected premium of Rs. 7823 million towards medical insurance. The companies settled claims of Rs. 6100 million for treatment received by insured persons at private hospitals and incurred administrative expenses of Rs.1400 million.

Answer

1. Rs. 6100 million spent for treatment at private hospitals is classified under HP 1.1.6. Place 6100 in HF 2.1 X HP 1.1.6 cell.
2. Difference between premium collected and claims settled is the net cost of administration (7823-6100=1723). Since this is higher than actual administrative costs, this amount is classified under HP 6. Health Administration and Insurance. Place 1723 in HF 2.1 X HP 6 cell.

Question Five

The table below show results of a national household survey and household spending in India for health care from various entities. To avoid double counting household expenditure on public hospitals and contributions to insurance are not included here as they have already been included under other financing agents

Provider	Rs. Million
Private Hospitals (Allopathic)	240125
Private Hospitals (ISM)	6105
NGO Hospitals	7849
Private Doctors	210412
Traditional Healers/Unqualified Providers	86332
Diagnostic Laboratories	69349
Pharmacies	124053

Answer

1. Expenditure on Private Hospitals (Allopathic) is classified under HP 1.1.6. Place Rs. 240125 million in HF 2.3 X HP 1.1.6 cell
2. Expenditure on Private Hospitals (ISM) is classified under HP 1.4. Place Rs. 6105 million in HF 2.3 X HP 1.4 cell
3. Expenditure on NGO hospitals is classified under HP 1.1.7. Place Rs. 7849 million in HF 2.3 X HP 1.1.7 cell
4. Expenditure on Private doctors, Traditional Healers/Unqualified Providers and Diagnostic Laboratories is classified under HP.3 Providers of Ambulatory Health Care. Place Rs 366093 million (210412 +86332+69349) in HF 2.3 X HP 3 cell.
5. Expenditure on Pharmacies is classified under HP.4 Retail sale of medical goods. Place Rs. 124053 million in HF 2.3 X HP 4 cell.

Question Six

A national survey of NGO's estimated that NGO's as providers of health care accounted for health expenditure of Rs. 33065 million. Of this, Rs. 24525 million flowed to NGOs from other financing agents. NGOs themselves were the financing agents for remaining expenditure. Table below shows relative share of expenditure on various health functions. The estimate of total expenditure on each function and expenditure through other financing agents have been worked out. How will you allocate expenditure from NGO's as the financing agent to various provider classes?

Services	% Share of Expenditure	Expenditure by Financing Agent	
		Total	Other HF
Hospital Services	48	15871	13549
Ambulance/Blood Banks	11.73	3880	3880
Public Health Services	33.25	10994	6596
Research	1.51	500	500
Training	3.63	1200	
Capital Expenditure on Hospitals	1.88	620	
Total (Rs. Million)	100	33065	24525

Answer

Deduct expenditure through other financing agents from total expenditure to arrive at expenditure accounted by NGO's as the financing agent

Services	Expenditure by Financing Agents (Rs Million)		
	Total	Other HF	NGOs
Hospital Services	15871	13549	2322
Ambulance/Blood Banks	3880	3880	0
Public Health Services	10994	6596	4398
Research	500	500	0
Training	1200		1200
Capital Expenditure on Hospitals	620		620
Total	33065	24525	8540

1. NGO hospitals are classified under HP 1.1.7. Place Rs. 2942 million (2322+620) in HF 2.4 X HP 1.1.7 cell
2. NGO providers of public health services are classified under HP 5. Place Rs. 4398 million in HF 2.4 X HP 5 cell
3. NGO providers of training are classified under HP 8.2. Place Rs. 1200 million in HF 2.4 X HP 8.2 cell.

Question Seven

A national survey estimated that public and private sector firms in India incurred a health expenditure of Rs. 57799 million. Of this, Rs. 13463 million was spend on contributions to various social insurance programmes. The remaining expenditure was shared equally on hospitals maintained by firms and reimbursement of expenses incurred for treatment at private hospitals.

Answer

Firms are financing agents for Rs. 44336 million (57799-13463). 50% of this is spent on own hospitals and is classified under HP 1.1.5 Hospitals owned by Firms. Place Rs 22168 in HF 2.5 X HP 1.1.5 cell. The remaining 50% is spent on private hospitals and classified under HP 1.1.6. Place Rs 22168 in HF 2.5 X HP 1.1.6 cell.

Question 1: Worked Out HF X HP Table

ICHA Code	Providers (HP)	Financing Agents (HF)							
		HF 1.1.1.1	HF 1.1.2.1	HF 1.2.2	HF 2.1	HF 2.3	FS 2.3	HF2.5
		MoHFW	State Department of Health	ESIS	GIC	House holds	NGOs	Firms
HP 1.1.1	Central Government Hospitals	5,826						
HP 1.1.2	State Government Hospitals							
HP 1.1.4	Hospitals under Social Insurance							
HP 1.1.5	Hospitals owned by Firms							
HP 1.1.6	Private Hospitals							
HP 1.1.7	Charitable Hospitals	1,860						
HP 1.4	ISM Hospitals							
HP 3	Providers of Ambulatory Health Care	440						
HP 4	Retail Sale of Medical Goods							
HP 5	Provision/Administration of PH Programs	11,063						
HP 6	Health Administration and Insurance	2,220						
HP 8.1	Research Institutions	1,500						
HP 8.2	Education and Training Institutions	1,720						
	Total Expenditure (Rs. Million)	24,629						
Trial Sum	Estimated Expenditure (Rs. Million)	24,629	141,699	17,954	7,823	744,225	8,540	44,336

Question 2: Worked Out HF X HP Table

ICHA Code	Providers (HP)	Financing Agents (HF)							
		HF 1.1.1.1	HF 1.1.2.1	HF 1.2.2	HF 2.1	HF 2.3	FS 2.3	HF2.5
		MoHFW	State Department of Health	ESIS	GIC	House holds	NGOs	Firms
HP 1.1.1	Central Government Hospitals	5,826						
HP 1.1.2	State Government Hospitals		74,932					
HP 1.1.4	Hospitals under Social Insurance							
HP 1.1.5	Hospitals owned by Firms							
HP 1.1.6	Private Hospitals							
HP 1.1.7	Charitable Hospitals	1,860						
HP 1.4	ISM Hospitals		3,234					
HP 3	Providers of Ambulatory Health Care	440	17,679					
HP 4	Retail Sale of Medical Goods							
HP 5	Provision/Administration of PH Programs	11,063	27,538					
HP 6	Health Administration and Insurance	2,220	9,360					
HP 8.1	Research Institutions	1,500						
HP 8.2	Education and Training Institutions	1,720	5,116					
	Total Expenditure (Rs. Million)	24,629	141,699					
Trial Sum	Estimated Expenditure (Rs. Million)	24,629	141,699	17,954	7,823	744,225	8,540	44,336

Question 3: Worked Out HF X HP Table

ICHA Code	Providers (HP)	Financing Agents (HF)							
		HF 1.1.1.1	HF 1.1.2.1	HF 1.2.2	HF 2.1	HF 2.3	FS 2.3	HF2.5
		MoHFW	State Department of Health	ESIS	GIC	House holds	NGOs	Firms
HP 1.1.1	Central Government Hospitals	5,826						
HP 1.1.2	State Government Hospitals		74,932					
HP 1.1.4	Hospitals under Social Insurance			12,470				
HP 1.1.5	Hospitals owned by Firms							
HP 1.1.6	Private Hospitals			1,900				
HP 1.1.7	Charitable Hospitals	1,860						
HP 1.4	ISM Hospitals		3,234					
HP 3	Providers of Ambulatory Health Care	440	17,679	2,180				
HP 4	Retail Sale of Medical Goods							
HP 5	Provision/Administration of PH Programs	11,063	27,538					
HP 6	Health Administration and Insurance	2,220	9,360	1,404				
HP 8.1	Research Institutions	1,500						
HP 8.2	Education and Training Institutions	1,720	5,116					
	Total Expenditure (Rs. Million)	24,629	141,699	17,954	7,823	744,225	8,540	44,336
Trial Sum	Estimated Expenditure (Rs. Million)	24,629	141,699	17,954				

Question 4: Worked Out HF X HP Table

ICHA Code	Providers (HP)	Financing Agents (HF)							
		HF 1.1.1.1	HF 1.1.2.1	HF 1.2.2	HF 2.1	HF 2.3	FS 2.3	HF2.5
		MoHFW	State Department of Health	ESIS	GIC	House holds	NGOs	Firms
HP 1.1.1	Central Government Hospitals	5,826						
HP 1.1.2	State Government Hospitals		74,932					
HP 1.1.4	Hospitals under Social Insurance			12,470				
HP 1.1.5	Hospitals owned by Firms							
HP 1.1.6	Private Hospitals			1,900	6,100			
HP 1.1.7	Charitable Hospitals	1,860						
HP 1.4	ISM Hospitals		3,234					
HP 3	Providers of Ambulatory Health Care	440	17,679	2,180				
HP 4	Retail Sale of Medical Goods							
HP 5	Provision/Administration of PH Programs	11,063	27,538					
HP 6	Health Administration and Insurance	2,220	9,360	1,404	1,723			
HP 8.1	Research Institutions	1,500						
HP 8.2	Education and Training Institutions	1,720	5,116					
	Total Expenditure (Rs. Million)	24,629	141,699	17,954	7,823			
Trial Sum	Estimated Expenditure (Rs. Million)	24,629	141,699	17,954	7,823	744,225	8,540	44,336

Question 5: Worked Out HF X HP Table

ICHA Code	Providers (HP)	Financing Agents (HF)							
		HF 1.1.1.1	HF 1.1.2.1	HF 1.2.2	HF 2.1	HF 2.3	FS 2.3	HF2.5
		MoHFW	State Department of Health	ESIS	GIC	House holds	NGOs	Firms
HP 1.1.1	Central Government Hospitals	5,826						
HP 1.1.2	State Government Hospitals		74,932					
HP 1.1.4	Hospitals under Social Insurance			12,470				
HP 1.1.5	Hospitals owned by Firms							
HP 1.1.6	Private Hospitals			1,900	6,100	240,125		
HP 1.1.7	Charitable Hospitals	1,860				7,849		
HP 1.4	ISM Hospitals		3,234			6,105		
HP 3	Providers of Ambulatory Health Care	440	17,679	2,180		366,093		
HP 4	Retail Sale of Medical Goods					124,053		
HP 5	Provision/Administration of PH Programs	11,063	27,538					
HP 6	Health Administration and Insurance	2,220	9,360	1,404	1,723			
HP 8.1	Research Institutions	1,500						
HP 8.2	Education and Training Institutions	1,720	5,116					
	Total Expenditure (Rs. Million)	24,629	141,699	17,954	7,823	744,225	8,540	
Trial Sum	Estimated Expenditure (Rs. Million)	24,629	141,699	17,954	7,823	744,225	8,540	44,336

Question 6: Worked Out HF X HP Table

ICHA Code	Providers (HP)	Financing Agents (HF)							
		HF 1.1.1.1	HF 1.1.2.1	HF 1.2.2	HF 2.1	HF 2.3	FS 2.3	HF2.5
		MoHFW	State Department of Health	ESIS	GIC	House holds	NGOs	Firms
HP 1.1.1	Central Government Hospitals	5,826					2,942	
HP 1.1.2	State Government Hospitals		74,932					
HP 1.1.4	Hospitals under Social Insurance			12,470				
HP 1.1.5	Hospitals owned by Firms							
HP 1.1.6	Private Hospitals			1,900	6,100	240,125		
HP 1.1.7	Charitable Hospitals	1,860				7,849		
HP 1.4	ISM Hospitals		3,234			6,105		
HP 3	Providers of Ambulatory Health Care	440	17,679	2,180		366,093		
HP 4	Retail Sale of Medical Goods					124,053		
HP 5	Provision/Administration of PH Programs	11,063	27,538				4,398	
HP 6	Health Administration and Insurance	2,220	9,360	1,404	1,723			
HP 8.1	Research Institutions	1,500						
HP 8.2	Education and Training Institutions	1,720	5,116				1,200	
	Total Expenditure (Rs. Million)	24,629	141,699	17,954	7,823	744,225	8,540	
Trial Sum	Estimated Expenditure (Rs. Million)	24,629	141,699	17,954	7,823	744,225	8,540	44,336

Question 7: Worked Out HF X HP Table

ICHA Code	Providers (HP)	Financing Agents (HF)							
		HF 1.1.1.1	HF 1.1.2.1	HF 1.2.2	HF 2.1	HF 2.3	FS 2.3	HF2.5
		MoHFW	State Department of Health	ESIS	GIC	House holds	NGOs	Firms
HP 1.1.1	Central Government Hospitals	5,826					2,942	
HP 1.1.2	State Government Hospitals		74,932					
HP 1.1.4	Hospitals under Social Insurance			12,470				
HP 1.1.5	Hospitals owned by Firms							22,168
HP 1.1.6	Private Hospitals			1,900	6,100	240,125		22,168
HP 1.1.7	Charitable Hospitals	1,860				7,849		
HP 1.4	ISM Hospitals		3,234			6,105		
HP 3	Providers of Ambulatory Health Care	440	17,679	2,180		366,093		
HP 4	Retail Sale of Medical Goods					124,053		
HP 5	Provision/Administration of PH Programs	11,063	27,538				4,398	
HP 6	Health Administration and Insurance	2,220	9,360	1,404	1,723			
HP 8.1	Research Institutions	1,500						
HP 8.2	Education and Training Institutions	1,720	5,116				1,200	
Trial Sum	Total Expenditure (Rs. Million)	24,629	141,699	17,954	7,823	744,225	8,540	44,336
NHE	Estimated Expenditure (Rs. Million)	24,629	141,699	17,954	7,823	744,225	8,540	44,336

Exercise Three

Question One

The Ministry of Health and Family Welfare (MoHFW) spends:

1. Rs. 5100 million on teaching hospitals under central government. Out of the above, Rs. 3600 million is classified under urban health services, Rs 1200 million under education and training and the remainder on capital expenditure
2. Rs. 2500 for research. Of this Rs.1500 million is spent on research institutions under MoHFW, Rs. 500 million for research taken up by central government medical colleges and remainder by educational institutions in nonprofit sector.
3. The MoHFW allocates Rs. 14076 million to the Reproductive and Child Health (RCH) program. From this, Rs.8043 million is transferred to State Health Departments. The remainder is used by the ministry for provision and administration of RCH programs through various entities under the ministry. Of this, Rs. 226 million is for constructing new post-partum wards in central government hospitals and Rs. 420 million is for central government training institutions to provide training in sterilization surgeries.
4. The MoHFW allocates Rs. 12034 million to disease control programs. From this, Rs.7956 million is transferred to State Health Departments. The remainder is used by the ministry for provision and administration of disease control programs through various entities under the ministry. Of this, Rs. 800 million is for unspecified training institutions to preovide training in management of disease control programmes.
5. MoHFW spends Rs.1560 million on general administration of ministry, Rs.300 million on drug control administration and Rs.360 million on prevention of food adulteration.
6. Under various public-private partnerships the Ministry contracts NGOs to provide hospital services, maintain blood banks and implement public health programs. MoHFW allocates Rs. 1860 million to NGO hospitals, Rs 440 million to NGO blood banks and Rs. 2398 million to public health services provided by NGOs.

Answer

1. Rs. 3600 million is classified under HC.1 Services of Curative Care and Rs. 1200 million specially earmarked for education and training under HCR.2. The remainder {5100-(3600+1200)= 300} spent on construction of buildings is classified under HCR.1. Place 3600 in HF 1.1.1.1 X HC.1 cell, 1200 in HF 1.1.1.1 X HCR.2 cell and 300 in HF 1.1.1.1 X HCR.1 cell.

2. Rs. 2500 million for research is classified under HCR.3 Research and Development in Health. Place 2500 in HF 1.1.1.1 X HCR.3 cell
3. State Health Departments are the financing agents for the Rs.8043 million transferred to them. MoHFW is financing agent for Rs. 6033 million {14076-8043). Of this Rs. 226 million is spent on HCR.1 Capital Formation and Rs.420 million is spent on HCR.2 Education and Training. The expenditure on health related functions is separated out and the remainder {6033- (420+226) = 5387)} is spent on HC. 6 Prevention and Public Health Services. Add 226 in HF 1.1.1.1 X HCR.1 cell, 420 in HF 1.1.1.1 X HCR.2 cell and 5387 in HF 1.1.1.1 X HC 6 cell.
4. State Health Departments are the financing agents for the Rs.7956 million transferred to them. MoHFW is financing agent for Rs. 4078 million {12034-7956). Of this Rs. 800 million is spent on HCR.2 Education and Training. The remainder (4078-800=3278) is spent on HC. 6 Prevention and Public Health Services. Add 800 in the HF 1.1.1.1 X HCR. 2 cell and 3278 in the HF 1.1.1.1 X HC.6 cell.
5. Rs.1560 million on general administration of ministry and Rs.300 million on drug control administration are classified under HC 7.1.1 Government Administration of Health. Rs.360 million on prevention of food adulteration is classified under HCR.4 Food, hygiene and drinking-water control. Add 1860 in HF 1.1.1.1 X HC 7.1.1 cell and 360 in HF 1.1.1.1 X HCR.4 cell.
6. Rs. 1860 million to NGO hospitals is classified under HC.1 Services of Curative Care, Rs 440 million to NGO blood banks under HC.4 Ancillary services to medical care and Rs. 2398 million to public health services provided by NGOs under HC. 6 Prevention and Public Health Services. Add 1860 in HF 1.1.1.1 X HC.1 cell, 2398 in HF 1.1.1.1 X HC.6 cell and 440 in HF 1.1.1.1 X HC.4 cell.

Question Two:

The Departments of Health combined together spend:

1. Rs. 21234 million on CHCs and government hospitals, Rs. 28211 million on PHCs, Rs. 8243 million on dispensaries and Rs. 24567 million on allopathic teaching hospitals. The above funds include expenditure of Rs 1200 million, Rs 1100 million and Rs. 1400 million for construction of government hospitals, PHCs and teaching hospitals respectively. The allocation to teaching hospitals include Rs. 9400 million earmarked for education and training.
2. Rs. 2456 million on AYUSH dispensaries and Rs. 3234 million on AYUSH teaching hospitals. The above funds also include Rs.130 million and Rs.240 million on construction of dispensaries and teaching hospitals respectively.

The allocation to teaching hospitals include Rs. 940 million earmarked for education and training.

3. Rs. 8600 million on general administration, Rs. 324 million on drug control administration and Rs. 436 million on prevention of food adulteration.
4. Rs. 18400 million on RCH programs. Of this, Rs. 2100 million is spent on RCH training by various training institutions, Rs 1340 million on construction of subsidiary health centres, Rs. 2200 million on additional ANMs in subsidiary health centres.
5. Rs. 12800 million on disease control programs. Of this, Rs. 1400 is spent on training of staff by various training institutions and Rs. 920 million on additional staff in government hospitals.
6. Under various public-private partnerships the State Departments of Health contracts NGOs to provide hospital services, maintain ambulance services and implement public health programs. State Departments of Health allocates Rs. 3840 million to NGO hospitals, Rs 3440 million to ambulance services run by NGOs and Rs. 4298 million to public health services provided by NGOs.
7. Rs. 400 million on research institutions to carry out routine surveys related to availability and reach of health services.
8. Rs. 1216 million on nursing and paramedical colleges. Of this Rs. 300 million was spent on capital expenditure.

Answer

1. After excluding allocations for health related functions the remainder is classified under HC.1 Services of Curative Care. Expenditure on construction of buildings is classified under HCR.1 and expenditure on education and training under HCR.2. Place Rs. 69155 million {(21234+28211+8243+24567)- (1200+1100+1400+9400)} in HF 1.1.2.1 X HC.1 cell; Rs. 3700 million (1200+1100+1400) million in HF 1.1.2.1 X HCR.1 cell; and Rs. 9400 million in HF 1.1.2.1 X HCR..2 cell.
2. After excluding allocations for health related functions the remainder is classified under HC.1 Services of Curative Care. Expenditure on construction of buildings is classified under HCR.1 and expenditure on education and training under HCR.2. Add Rs. 4380 million {(2456+3234)-(130+240+940) in HF 1.1.2.1 X HC.1 cell; Rs. 370 million (130+240) in HF 1.1.2.1 X HCR.1 cell; and Rs. 940 million in HF 1.1.2.1 X HCR..2 cell.
3. Rs.8600 million on general administration of departments and Rs.324 million on drug control administration are classified under HC 7.1.1 Government Administration of Health. Rs.436 million on prevention of food adulteration is classified under HCR.4 Food, hygiene and drinking-water control. Add

8924 (8600+324) in HF 1.1.2.1 X HC 7.1.1 cell and 436 in HF 1.1.2.1 X HCR.4 cell

4. After excluding allocations for health related functions the remainder is classified under HC.6 Prevention and public health services. Add Rs. 14960 million {18400-(1340+ 2100)} in HF 1.1.2.1 X HC. 6 cell; Rs. 2100 million in HF 1.1.2.1 X HCR.2 cell; and Rs. 1340 million in HF 1.1.2.1 X HCR.1 cell.
5. After excluding allocations for health related functions the remainder is classified under HC.6 Prevention and public health services. Add Rs. 11400 million {12800-1400} in HF 1.1.2.1 X HC. 6 cell; and Rs. 1400 million in HF 1.1.2.1 X HCR.2 cell.
6. Rs. 3840 million to NGO hospitals is classified under HC.1 Services of Curative Care, Rs 3440 million to ambulance services under HC.4 Ancillary services to medical care and Rs. 4298 million to public health services provided by NGOs under HC. 6 Prevention and Public Health Services. Add 3840 in HF 1.1.2.1 X HC.1 cell, 4298 in HF 1.1.2.1 X HC.6 cell and 3440 in HF 1.1.2.1 X HC.4 cell.
7. Routine surveys are part of the information system, which is part of the administrative functions of the government and is included under HC.7. 1.1. Add Rs. 400 million in HF 1.1.2.1 X HC .7. 1.1 cell.
8. Expenditure on nursing colleges and paramedical colleges is classified under HCR.2. Since this is a health related function, capital expenditure is not shown separately but included under HCR.2 itself. Add Rs. 1216 million in HF 1.1.2.1 X HCR.2 cell.

Question Three:

The following expenditure was incurred by the Employees State Insurance Scheme:

1. Rs. 12300 million on ESI hospitals
2. Rs. 2100 million on ESI dispensaries
3. Rs. 170 million on construction of ESI hospitals
4. Rs. 80 million on construction of ESI dispensaries
5. Rs. 1900 million reimbursed to private hospitals for referral treatment
6. Rs. 1404 million on administration of scheme

Answer

1. Expenditure on ESI hospitals and dispensaries (excluding capital expenditure) and private hospitals is classified under HC 1 Services of

Curative Care. Place Rs.16300 (12300+2100+1900) in HF 1.2.2 X HC. 1 cell.

2. Expenditure on administration of scheme is classified under HC.7.1.2 Administration of social security funds. Place Rs. 1404 million in HF 1.2.2 X HC.7.1.2 cell
3. Expenditure on construction of buildings is classified under HCR.1 Capital formation. Place Rs. 250 million (170+80) in HF 1.2.2 X HCR. 1 cell.

Question Four

The companies under General Insurance Corporation collected premium of Rs. 7823 million towards medical insurance. The companies settled claims of Rs. 6100 million for treatment received by insured persons at private hospitals and incurred administrative expenses of Rs.1400 million

Answer

1. Rs. 6100 million spent on hospital treatment is classified under HC.1 Services of Curative Care. Place 6100 in HF 2.1 X HC.1 cell
2. Administrative costs is less than difference between premium collected and claims settled. Therefore the difference between premium collected and claims settled is considered as the net cost of administration and classified under HC.7.2 Health administration and health insurance: private. Place Rs. 1723 million (7823-6100) in HF 2.1 X HC 7.2

Question Five

The table below show results of a national household survey and household spending in India for health care from various entities. To avoid double counting household expenditure on public hospitals and contributions to insurance are not included here as they have already been included under other financing agents. The survey indicates that 20% of the household expenditure has been on availing reproductive and child health services.

Provider	Rs. Million
Private Hospitals (Allopathic)	240125
Private Hospitals (ISM)	6105
NGO Hospitals	7849
Private Doctors	210412
Traditional Healers	86332
Diagnostic Laboratories	69349
Pharmacies	124053

Answer

1. Expenditure on private/NGO hospitals, doctors and traditional healers are included under HC.1 Services of curative care. Household expenditure on RCH services is also included under curative care. Place Rs. 550823 million (240125+6105+7849 +210412+86332) in HF 2.3 X HC.1 cell
2. Expenditure on diagnostic laboratories is included under HC.4 Ancillary services to medical care. Place Rs. 69349 million in HF 2.3 X HC 4 cell
3. Expenditure on pharmacies is included under HC 5 Medical goods dispensed to outpatients. Place Rs. 124053 in HF 2.3 X HC 5 cell.

Question Six

A national survey of NGO's estimated that NGO's as providers of health care accounted for health expenditure of Rs. 33065 million. Of this, Rs. 24525 million flowed to NGOs from other financing agents. NGOs themselves were the financing agents for remaining expenditure. Table below shows relative share of expenditure on various health functions. The estimate of total expenditure on each function and expenditure through other financing agents have been worked out. How will you allocate expenditure from NGO's as the financing agent to various functional classes?

Services	% Share of Expenditure	Expenditure by Financing Agent	
		Total	Other HF
Hospital Services	48	15871	13549
Ambulance/Blood Banks	11.73	3880	3880
Public Health Services	33.25	10994	6596
Research	1.51	500	500
Training	3.63	1200	
Capital Expenditure on Hospitals	1.88	620	
Total (Rs. Million)	100	33065	24525

Answer

Deduct expenditure through other financing agents from total expenditure to arrive at expenditure accounted by NGO's as the financing agent.

1. Expenditure on hospital services is classified under HC.1 Services of Curative Care. Place Rs. 2322 million in HF 2.4 X HC.1 cell
2. Public Health Services are classified under HC.6. Place Rs. 4398 million in HF 2.4 X HC 6 cell
3. Training is classified under HCR.. 2 Education and training of health personnel. Place Rs. 1200 million in HF 2.4 X HCR. 2 cell

4. Capital expenditure is classified under HCR.1. Place Rs. 620 million in HF 2.4 X HCR. 1 cell.

Services	Expenditure by Financing Agents (Rs Million)		
	Total	Other HF	NGOs
Hospital Services	15871	13549	2322
Ambulance/Blood Banks	3880	3880	0
Public Health Services	10994	6596	4398
Research	500	500	0
Training	1200		1200
Capital Expenditure on Hospitals	620		620
Total	33065	24525	8540

Question Seven

A national survey estimated that public and private sector firms in India incurred a health expenditure of Rs. 57799 million. Of this, Rs. 13463 million was spend on contributions to various social insurance programmes. The remaining expenditure was shared equally on hospitals maintained by firms and reimbursement of expenses incurred for treatment at private hospitals.

Answer

Firms are financing agents for Rs. 44336 million (57799-13463). The entire amount is spent on hospital services and hence included under HC.1. Place 44336 in HF 2.5 X HC.1 cell

Question 1: Worked Out HF X HC Table

ICHA Code	Functions (HC)	Financing Agents (HF)							
		HF 1.1.1.1	HF 1.1.2.1	HF 1.2.2	HF 2.1	HF 2.3	FS 2.3	HF2.5
		MoHFW	State Department of Health	ESIS	GIC	House holds	NGOs	Firms
HC.1	Services of curative care	5,460						
HC.4	Ancillary services to medical care	440						
HC.5	Medical goods dispensed to outpatients							
HC.6	Prevention and public health services	11,063						
HC.7.1.1	Government administration (except social	1,860						
HC.7.1.2	Administration of social security funds							
HC.7.2	Health administration/insurance: private							
HC.R.1	Capital formation	526						
HC.R.2	Education and training of health personnel	2,420						
HC.R.3	Research and development in health	2,500						
HC.R.4	Food, hygiene and drinking-water control	360						
	Total Expenditure (Rs. Million)	24,629						
Trial Sum	Estimated Expenditure (Rs. Million)	24,629	141,699	17,954	7,823	744,225	8,540	44,336

Question 2: Worked Out HF X HC Table

ICHA Code	Functions (HC)	Financing Agents (HF)							
		HF 1.1.1.1	HF 1.1.2.1	HF 1.2.2	HF 2.1	HF 2.3	FS 2.3	HF2.5
		MoHFW	State Department of Health	ESIS	GIC	House holds	NGOs	Firms
HC.1	Services of curative care	5,460	77,375					
HC.4	Ancillary services to medical care	440	3,440					
HC.5	Medical goods dispensed to outpatients							
HC.6	Prevention and public health services	11,063	30,658					
HC.7.1.1	Government administration (except social	1,860	9,324					
HC.7.1.2	Administration of social security funds		15,056					
HC.7.2	Health administration/insurance: private							
HC.R.1	Capital formation	526	5,410					
HC.R.2	Education and training of health personnel	2,420	15,056					
HC.R.3	Research and development in health	2,500						
HC.R.4	Food, hygiene and drinking-water control	360	436					
	Total Expenditure (Rs. Million)	24,629	141,699					
Trial Sum	Estimated Expenditure (Rs. Million)	24,629	141,699	17,954	7,823	744,225	8,540	44,336

Question 3: Worked Out HF X HC Table

ICHA Code	Functions (HC)	Financing Agents (HF)							
		HF 1.1.1.1	HF 1.1.2.1	HF 1.2.2	HF 2.1	HF 2.3	FS 2.3	HF2.5
		MoHFW	State Department of Health	ESIS	GIC	House holds	NGOs	Firms
HC.1	Services of curative care	5,460	77,375	16,300				
HC.4	Ancillary services to medical care	440	3,440					
HC.5	Medical goods dispensed to outpatients							
HC.6	Prevention and public health services	11,063	30,658					
HC.7.1.1	Government administration (except social	1,860	9,324					
HC.7.1.2	Administration of social security funds		15,056	1,404				
HC.7.2	Health administration/insurance: private							
HC.R.1	Capital formation	526	5,410	250				
HC.R.2	Education and training of health personnel	2,420	15,056					
HC.R.3	Research and development in health	2,500						
HC.R.4	Food, hygiene and drinking-water control	360	436					
	Total Expenditure (Rs. Million)	24,629	141,699	17,954				
Trial Sum	Estimated Expenditure (Rs. Million)	24,629	141,699	17,954	7,823	744,225	8,540	44,336

Question 4: Worked Out HF X HC Table

ICHA Code	Functions (HC)	Financing Agents (HF)							
		HF 1.1.1.1	HF 1.1.2.1	HF 1.2.2	HF 2.1	HF 2.3	FS 2.3	HF2.5
		MoHFW	State Department of Health	ESIS	GIC	House holds	NGOs	Firms
HC.1	Services of curative care	5,460	77,375	16,300	6,100			
HC.4	Ancillary services to medical care	440	3,440					
HC.5	Medical goods dispensed to outpatients							
HC.6	Prevention and public health services	11,063	30,658					
HC.7.1.1	Government administration (except social	1,860	9,324					
HC.7.1.2	Administration of social security funds		15,056	1,404				
HC.7.2	Health administration/insurance: private				1,723			
HC.R.1	Capital formation	526	5,410	250				
HC.R.2	Education and training of health personnel	2,420	15,056					
HC.R.3	Research and development in health	2,500						
HC.R.4	Food, hygiene and drinking-water control	360	436					
	Total Expenditure (Rs. Million)	24,629	141,699	17,954	7,823			
Trial Sum	Estimated Expenditure (Rs. Million)	24,629	141,699	17,954	7,823	744,225	8,540	44,336

Question 5: Worked Out HF X HC Table

ICHA Code	Functions (HC)	Financing Agents (HF)							
		HF 1.1.1.1	HF 1.1.2.1	HF 1.2.2	HF 2.1	HF 2.3	FS 2.3	HF2.5
		MoHFW	State Department of Health	ESIS	GIC	House holds	NGOs	Firms
HC.1	Services of curative care	5,460	77,375	16,300	6,100	550,823		
HC.4	Ancillary services to medical care	440	3,440			69,349		
HC.5	Medical goods dispensed to outpatients					124,053		
HC.6	Prevention and public health services	11,063	30,658					
HC.7.1.1	Government administration (except social	1,860	9,324					
HC.7.1.2	Administration of social security funds		15,056	1,404				
HC.7.2	Health administration/insurance: private				1,723			
HC.R.1	Capital formation	526	5,410	250				
HC.R.2	Education and training of health personnel	2,420	15,056					
HC.R.3	Research and development in health	2,500						
HC.R.4	Food, hygiene and drinking-water control	360	436					
	Total Expenditure (Rs. Million)	24,629	141,699	17,954	7,823	744,225		
Trial Sum	Estimated Expenditure (Rs. Million)	24,629	141,699	17,954	7,823	744,225	8,540	44,336

Question 6: Worked Out HF X HC Table

ICHA Code	Functions (HC)	Financing Agents (HF)							
		HF 1.1.1.1	HF 1.1.2.1	HF 1.2.2	HF 2.1	HF 2.3	FS 2.3	HF2.5
		MoHFW	State Department of Health	ESIS	GIC	House holds	NGOs	Firms
HC.1	Services of curative care	5,460	77,375	16,300	6,100	550,823	2,322	
HC.4	Ancillary services to medical care	440	3,440			69,349		
HC.5	Medical goods dispensed to outpatients					124,053		
HC.6	Prevention and public health services	11,063	30,658				4,398	
HC.7.1.1	Government administration (except social	1,860	9,324					
HC.7.1.2	Administration of social security funds		15,056	1,404				
HC.7.2	Health administration/insurance: private				1,723			
HC.R.1	Capital formation	526	5,410	250			620	
HC.R.2	Education and training of health personnel	2,420	15,056				1,200	
HC.R.3	Research and development in health	2,500						
HC.R.4	Food, hygiene and drinking-water control	360	436					
Trial Sum	Total Expenditure (Rs. Million)	24,629	141,699	17,954	7,823	744,225	8,540	
NHE	Estimated Expenditure (Rs. Million)	24,629	141,699	17,954	7,823	744,225	8,540	44,336

Question 7: Worked Out HF X HC Table

ICHA Code	Functions (HC)	Financing Agents (HF)							
		HF 1.1.1.1	HF 1.1.2.1	HF 1.2.2	HF 2.1	HF 2.3	FS 2.3	HF2.5
		MoHFW	State Department of Health	ESIS	GIC	House holds	NGOs	Firms
HC.1	Services of curative care	5,460	77,375	16,300	6,100	550,823	2,322	44,336
HC.4	Ancillary services to medical care	440	3,440			69,349		
HC.5	Medical goods dispensed to outpatients					124,053		
HC.6	Prevention and public health services	11,063	30,658				4,398	
HC.7.1.1	Government administration (except social	1,860	9,324					
HC.7.1.2	Administration of social security funds		15,056	1,404				
HC.7.2	Health administration/insurance: private				1,723			
HC.R.1	Capital formation	526	5,410	250			620	
HC.R.2	Education and training of health personnel	2,420	15,056				1,200	
HC.R.3	Research and development in health	2,500						
HC.R.4	Food, hygiene and drinking-water control	360	436					
	Total Expenditure (Rs. Million)	24,629	141,699	17,954	7,823	744,225	8,540	44,336
Trial Sum	Estimated Expenditure (Rs. Million)	24,629	141,699	17,954	7,823	744,225	8,540	44,336

Post Test for NHA Training Workshop

Question One

What do you think are the uses of National Health Accounts?

Answer

1. NHA is an internationally accepted methodology used to determine a nation's total health expenditure patterns. It is an useful tool for tracking flow of funds in a health system and answers questions such as
    - ☐ How are resources mobilized and managed for the health system?
    - ☐ Who pays and how much is paid for health care?
    - ☐ What goods and services are provided and by whom?
    - ☐ Who benefits from health care expenditure?
2. NHA is a particularly useful as a policy tool because:
    - ☐ NHA offers an international standardization of health expenditure information.
    - ☐ If implemented on a regular basis, NHA can track health expenditure trends, which is useful for health care monitoring and evaluation purposes.
    - ☐ NHA methodology can also be used to make financial projections of a country's health system requirements.
    - ☐ NHA data combined with non-financial data such as disease prevalence rates and provider utilization rates, equips policy makers to make sound policy decisions and avoid potentially adverse policy choices.

Question Two

What do you understand by the terms-Financing Source, Financing Agent, Provider and Function in the context of NHA? Give examples of each.

Answer

- ☐ Financing Sources: Sources refer to the entities from which financial resources are generated for health. Health spending by sources answer the question "where does the money come from for health care?' Examples in the Indian context include: governments (state, central and local), public and private sector enterprises, NGOs, households, donor agencies etc

- Financing Agents are institutions or entities that channel funds provided by financing sources and use the funds to pay for, or purchase, the activities inside the health accounts boundary. This category sheds light on the question "who manages and organizes funds for health care?" Examples are State and Central Ministries for Health, NGOs, social and private insurance etc.
- Providers: They are the end users or final recipients of health care funds. They are the entities which deliver health services. They include hospitals, private doctors, Trained Birth Attendants, traditional care providers, providers of ancillary health services etc.
- Functions refer to the services or activities that providers deliver with their funds. Information at this level answers the question" what type of service product or activity was actually produced? Examples include curative care, preventive care, family welfare services, health care administration, medical education, research etc

Question Three

Which of the following expenditures incurred by Gram Panchayats in a State will you include in NHA and under which functions? Give Reasons

1. Construction and maintenance of drains and the disposal of drainage water and sullage
2. Cleaning of streets and removal of rubbish and prickly pear and other relevant items to improve sanitary conditions in the village.
3. Provision of latrines and arrangements
4. Mosquito control measures for prevention of malaria
5. Conducting pulse polio programmes
6. Establishment and maintenance of dispensaries
7. Implementing noon day meal programme for school children
8. Surveillance of drinking water quality
9. Enforcement of the Prevention of Food Adulteration Act, 1964

Answer:

- Expenditure on items 1-3 will not be included as they are sanitation related activities which fall outside the functional boundaries of health expenditure
- Items 4 and 5 relate to control of communicable diseases and are included under the function HC 6.3- Prevention of Communicable Diseases

- Item 6 relate to services of curative care and is included under the function HC 1.3- Outpatient Curative Care
- Item 7 will not be included as it is essentially an antipoverty programme rather than a health service and hence fall outside the functional boundary of health expenditure
- Items 8 and 9 are activities related to ensuring quality of drinking water and food for prevention of diseases. They are included as a Health Related Function HC.R 4- Food, Hygiene and drinking water control

Question Four

The Department of Health and Family Welfare of State is implementing a health insurance scheme for all families living below poverty line for the treatment of major ailments requiring hospitalization and surgery. The scheme is managed by a "Health Trust" that has been set up by the government. The State government pays an yearly premium to the Trust to provide coverage of Rs. 1 lakh per beneficiary. Additional expenses have to be borne by the beneficiaries. The Department of Health and Family Welfare fixes payment rates for different types of procedures and issues guidelines on which provider could be enrolled in the scheme. In 2006-07 the government paid a premium of Rs. 100 crore to the insurance company. The insurance company reimbursed Rs. 50 crore and Rs. 20 crore to private and public hospitals which provided hospitalized care to the beneficiaries. In addition, the company incurred an expenditure of Rs. 20 crore on administration of the scheme. Beneficiaries whose treatment cost exceeded the coverage limit, spent Rs. 15 crore from their own pockets in availing the benefits from private hospitals.

1. Under what type of insurance would you include the aforesaid scheme? Give reasons.
2. Identify the sources of funds, financing agents, providers and functions of the scheme and depict the flow of funds in tables given below; from:
    i. Sources to Financing Agents
    ii. Financing Agents to Providers
    iii. Financing Agents to Functions

Answer:

1. This is a social security scheme since the programme covers all BPL families, and is financed and controlled by the government.
2. The State Government which pays the premium and households which pay treatment costs over and above the coverage limit are the sources of funds. Funds provided by the State Government are managed by a Trust specifically set up for the purpose (social security scheme) and out of pocket

expenditures are managed by households themselves. Hence the social security scheme and households are the financing agents. Funds from social security scheme flows to the following providers- private hospital (Rs.50 crore), public hospital (Rs.20 crore) and the remainder is retained by the scheme for administration of the same (Rs.30 crore). Funds from households flow directly to private hospitals for availing hospitalized curative care services. Funds flowing from the scheme to public and private hospitals (Rs.70 crore) is for inpatient curative care services. Though only Rs.20 crore is spent on administrative functions the entire amount retained by the scheme i.e., difference between premium and disbursement (Rs.100 cr - Rs.70cr = Rs.30 cr) is considered as net cost of health insurance and classified among the administrative function.

i. Sources to Financing Agents

Financing Agents	Sources of Funds		Total
	State Government	Households	
Social Security Schemes	100		100
Households		15	15
Total (Rs. Crore)	100	15	115

ii. Financing Agents to Providers

Providers	Financing Agents		Total
	Social Security	Households	
Private Hospitals	50	15	65
Public Hospitals	20		20
Health Administration and	30		30
Total (Rs. Crore)	100	15	115

iii. Financing Agents to Functions

Functions	Financing Agents		Total
	Social Security	Households	
Inpatient Curative Care	70	15	85
Administration, support and	30		30
Total (Rs. Crore)	100	15	115

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