CHAPTER 1
INTRODUCTION

Development is a process of growth in the direction of modernity especially towards nation building and socio-economic progress. Development implies progressive improvements in the living conditions and quality of life enjoyed by society and shared by its members. Amongst the objectives of development are health and productivity. They are reciprocal and complementary. Without health, productivity can hardly flourish. On the other hand, productivity may increase means and opportunities for better health. Thus good health is a prerequisite to human productivity and the development process. A healthy community is the infrastructure upon which to build an economically viable society. There can be no two opinions that health is basic to national progress and in terms of resources for economic development nothing could be of greater significance than the health of the people. Health is defined as "a state of complete physical, mental and social well-being and not merely an absence of disease or infirmity." "Health is a positive state of well-being in which harmonious development of mental and physical capacities of the individuals lead to the enjoyment of a rich and full life ........... It implies adjustment of the individual to his total environment - physical and social". 

Against this backdrop, a hospital should be viewed as a potent tool of development. Hospital organisation is an essential and integral part of the health services of a country. The medical care to the community, by and

2. Govt of India, First Five Year Plan, 1951, p.488.
large, is rendered through hospitals which are the pivotal points of all health services. The main function of a hospital is to promote the health of the community which it serves. "Hospital is an integral part of a social and medical organisation, the function of which is to provide for the population, complete health care, both curative and preventive......; the hospital is also a centre for the training of health workers and for bio-social research" and "an institution that provides in-patient accommodation for medical and nursing care". Hospitals have now become indispensable to the proper care of the broad spectrum of health problems. The basic purpose of the hospital is 'better patient care' and return the patient back to the community as a productive unit of that community. In a dynamic society, the hospital occupies a unique place to accommodate explosion of science into medicine and the whole galaxy of new treatment techniques, new equipments and proliferation of services which have made a profound impact on the provision of care facilities and services. Further, the development of socio-politico, cultural and educational systems have made the people conscious of their rights and they demand that modern and best means of medical and health care be made available to them. A major hospital is at once a hotel, a treatment centre, a laboratory and a university. Hospitals typically employ a large number of professionals, both physicians and other experts and have a high degree of specialisation of labour. These impacts have made a hospital a very complex organisation. Management of such a complex organisation requires blending of technical, administrative and accounting competence in the right direction. Each hospital is a distinct entity and as such each has to be tailored to the specific aims to be accomplished, the specific tasks to be performed, the

volume of services to be rendered and the type of the community to be served. The output of "better patient care" should be secured by hospitals through optimum utilisation of available resources.

1.1 **STATEMENT OF THE PROBLEM**

It is a fact that there now exists a sound framework of accounting theory to ascertain the working results and the investment status of hospitals. Yet, there is no system of accounting in practice to conduct its activities with utmost efficiency. No attempts have hitherto been made for the continuous improvement in the services rendered by hospitals. Personal investments in hospitals have made the interaction of business to some extent. Planning, decision making and control assume increasing importance as hospitals grow in size and complexity. Moreover, wise and effective utilisation of resources should be ensured. The importance of cost cannot be overlooked in this context. Cost is the most effective factor in the determination of the prices of hospital services rendered. The important managerial functions have to rely heavily on accurate and timely cost information. More people can be provided with services if no services cost more than what is a must to provide the necessary level of care. The price paid for high cost technology for a few is no technology at all for the many. Hence no pains must be spared in ascertaining, presenting, controlling and reducing costs. An effective system of Cost Accountancy and Cost Control is imperative for the survival of hospitals in the intensely competitive conditions of today. The valuable objective of "better patient care" can be attained only if the management can make use of the various tools and techniques to ascertain, control and reduce each item of cost in hospitals. Constant efforts must be made by the management to continuously improve their services and bring down costs.
and prices of all hospital services. Cost Accountancy has made its impressive impact on almost all the spheres of human activities. It is high time a comprehensive Cost Accountancy and Cost Control system be implemented in hospitals. The problem under study thus is the designing of a sound and full-fledged Cost Accountancy and Cost Control system that suits the requirements of hospitals. It is for the first time in India during the evolution of Cost Accountancy that a comprehensive cost system is tried in hospitals.

1.2 OBJECTIVE OF THE STUDY

The objective of the study is to design a sound and full-fledged Cost Accountancy system in hospitals. It is also the objective of the study to work out suitable control techniques to contain the ever-increasing hospital costs. Following aspects are covered in a logical sequence in the study to attain the objectives:

1. To see whether a Cost Accountancy system is in practice in hospitals.

2. To enquire whether any control systems exist in hospitals to keep the hospital costs within desired limits.

3. To see whether the Cost Accountancy and Cost Control systems, if existing in hospitals, are comprehensive and effective in their mission.

4. To pinpoint the weaknesses if any inherent in any existing systems of Cost Accountancy and Cost Control in hospitals.

5. To give suggestions to overcome such weaknesses with a view to make the existing cost systems more effective and efficient.
6. To locate the weaknesses, inefficiencies and losses in hospitals in the absence of Cost Accountancy and Cost Control System.

7. To design a sound and full-fledged Cost Accountancy System that suits the requirements of hospitals. The suggested hospital cost system is to include Cost Accounting procedures in respect of Materials and Supplies, hospital labour and other Expenses, Cost book-keeping scheme, Cost-Finding procedures and the application of special Cost Accounting techniques in hospitals.

8. To suggest suitable Cost Control measures to ensure containment of hospital costs in all spheres.

9. To design a Hospital Information System to help the management to take appropriate and sound decisions.

1.3 REVIEW OF LITERATURE

Literature on this particular area of study is brought under two heads:

1. General, and
2. Specific

1. GENERAL

Management control process requires accounting data and a major portion of the task of supplying such data is in the domain of Cost Accountancy. Cost Accountancy as a branch of Financial Accounting is closely interwoven into Management Accounting. The principles, practices and techniques of these disciplines form the general framework of the study. An intensive approach is followed
to deduce the most practical propositions for the designing of a cost system in hospitals.

2. SPECIFIC

Since Cost Accountancy and Cost Control Systems are to be applied in hospitals, special attention has been paid to the nature and mode of operation of hospital activities. The organisational pattern, management system and the accounting procedure in hospitals deserve particular consideration in this respect. The problems of planning, decision-making, Co-ordination and control in hospitals are examined and analysed.

No studies have yet been undertaken to run the hospitals efficiently and economically. The working of a full-fledged Cost Accountancy System has never been tested in hospitals. Very little has been done to reduce the cost of various activities in hospitals. There is also the absence of effective application of Cost Control techniques in hospitals. There is a great dearth in the literature on this topic of study and the few references available have helped to formulate valid theories, procedure and techniques of Cost Accountancy and Cost Control that should fit into the hospital system.

Lasser (1954) outlines the theory of accounting for private hospitals. Patients should be charged according to the principle "What traffic can bear", but cost must also be taken into account.

Barnes W Thomas (1965) finds that hospitals do not use cost accounting system in the traditional sense; instead, they employ cost finding techniques. The objective of hospital cost finding is the accurate determination of departmental costs. Even the most basic hospital accounting systems usually record direct expenses departmentally, but indirect expenses must be calculated, and then total cost properly allocated to the different departmental functions or types of patients.

Maurice W Cunning (1971) has given a fine description of the problems of hospital staff management. The techniques of planning, supply, recruitment and placement of hospital employees should be given proper attention by the management. Major areas of control of labour in hospitals include measurement of labour performance, minimisation of labour turnover and appropriate schemes of remuneration of hospital staff.

John Leslie Livingstone (1974) explains the introduction of management accounting in hospitals through a case study. There is the need to develop an efficient system to enhance the effectiveness of the top management of a hospital.

The voluntary Health Association of India (1975) in its Accounting guide for hospitals deals with hospital cost finding procedure. Cost finding is the process of allocating all costs of operating the hospital to


departments which produce revenue in order to obtain the cost of each unit of service rendered by the hospital. If the total cost of operating the hospital is to be recovered from the patients who receive service, an accurate assignment of all costs must be made only to the departments providing services for which patients pay. The four basic steps of cost finding method include the selecting the cost centres from which and to which costs will be allocated, establishing the bases for distributing the costs, allocating the cost of the general service cost centres to the revenue producing centres and summarising the cost data in a report.

Gupta and Juyal (1978) conducted an exploratory study on cost analysis in a welfare centre. The objective was to work out cost analysis of various activities performed by the staff and also to determine unit of various services provided in clinic and during home visits. The staff activities were divided into productive and non-productive and cost was computed for each activity and for each category of staff. There were six categories of services rendered during clinic visit and home visit and cost was computed for each type of service.

Harold Trader (1986) tries to develop a Management Accounting system in hospitals by projecting three types of reports. Managers' Report compares the budget with actual performance. Productivity Report yields a productivity index and also provides a measure of efficiency. The Capital Budget Analysis Report reviews the Capital Budgeting necessary


for any desired equipment purchase. Control of hospital operations are facilitated by these reports.

According to R.K. Sarma, the Cost Containment Programme in hospitals can be dealt at two levels, one is macro level, i.e., on the overall functioning of the hospital and at micro level, i.e., in the day-to-day operation of the hospital and its functional units. Macro level programme deals with policies, programming and planning of hospital and health facilities. Cost Containment in micro level includes efficiency of supportive services, machinery, equipment and materials and professional reviews in hospitals.

Dr. Ashok Sahni compiled the papers submitted to the Seventh Annual conference of Indian Society of Health Administrators. The papers cover a wide range of techniques of cost reduction in hospitals. The areas include construction and Equipment Management, Financial Planning, Costing systems, computers and Management Systems.

Ananthapadmanabhan lays down some important techniques to control and to reduce material costs in hospitals. The cost control techniques include:

- Inventory Control
- Minimisation of Rejections and Wastages
- Resistance of price increases
- Elimination of stock out costs, and
- Standardisation

Cost reduction techniques include:
- Locating cheaper source
- Use of reusables
- Cutting down procurement cost, and
- Value analysis

Daksha D. Pandit (1988) conducted a study on the cost assessment of an urban health centre in Bombay. The total expenditure of the centre was divided into variable and Fixed Expenditure. Total Out-patient days were calculated by multiplying the total number of outpatients in one year by four for which days patients are given medicines in the centre. Total cost per out-patient day is arrived at by adding the Fixed Cost per patient-day and variable cost per patient day. The study helped the centre to identify what went wrong with earlier projections, to evaluate past experience and to use the information obtained to improve the next year's projection of services.

Ashok Kumar Roy indicates the various aspects which should be given due consideration while designing a cost reduction programme for hospital. The major aspects include:

- Location of hospitals
- Training Programme
- Type of Building, Equipment and facilities
- Staffing
- Hospital supplies
- Utilities
- Maintenance
- Shared services
- Management responsibility

Tiwari (1990) attempts to explain the importance of Budgeting in hospitals. The types of budgets suitable to hospitals are:

Operating Budgets
Cash Budget, and
Capital Budget

The specific duties of a budget committee in a hospital includes collection of necessary data for various budgets and consolidation of draft budgets into a Master budget. Budgetary control in hospitals is achieved by

- Performance appraisal
- Corrective action, and
- Follow up

Lloyd G. Reynolds gives a vivid picture of quasi-public goods including health care. He looks into the economics of the large and growing health care industry. This is a peculiar industry only because of the fact that

the supplier (the doctor) rather than the customer (the patient) largely determines the demand for health care. The present organisation of hospital care encourages escalation of costs per patient-day and also excessive use of hospital facilities. Issues in the delivery of medical care include the problem of access to medical services, inefficient utilisation of the doctor's time, and the cost advantage of organisations large enough to use specialised para medical personnel.

1.4 DATA AND METHODOLOGY

The research study is designed in such a way that the different aspects of the hospital activities are investigated with a view to explore the practicability of designing a comprehensive Cost Accountancy and Cost Control System in the hospital organisation. The hospitals under study are in the private sector and the forms of organising them range from individual ownership to Christian Medical Missions. The hospitals adopt Allopathic system of Medicine. All the hospitals have the modern and advanced diagnostic and treatment facilities. There are ten private hospitals having hundred or more beds for in-patients in Ernakulam District. A census study is conducted in the ten hospitals in the district to collect the requisite data. Primary data is collected from the hospitals and other source are also tapped in so far as they are relevant for the study. Data is collected in respect of all Hospitals Costs, hospital procedures, techniques and methods of hospital activities, and other relevant information required for the study. Data is collected for the year 1990-'91 and data relating to the immediately preceding years are also collected whenever it is considered necessary.

Personal interviews using a structured and pretested schedule and observation are the techniques used for the collection of data. The schedule of questions covers all the aspects of the working of hospitals and it is at a number of sittings that the schedule is completed for each hospital. All the categories of hospital personnel are interviewed for the study. The interviews are unstructured and informal. They are in the form of long and detailed discussions with surgeons from different specialities and the hospital technical staff in particular. Many of the important hospital procedures and methods are observed directly in cases where information cannot be obtained in any other manner.

The data is analysed by applying the techniques and procedures of Cost Accountancy. The procedures and practices in hospitals in respect of each element of cost are analysed with a view to locate the weaknesses in the existing systems. Appropriate and detailed suggestions are recommended within the theoretical framework of Cost Accountancy to improve the overall efficiency of hospitals. The suggestions are thoroughly tested for their suitability and practicability within the hospital system. The total cost structure of a typical hospital is analysed in detail with a view to compute the cost of various hospital services rendered to patients. The cost analysis is done by using Cost Accounting techniques which are suggested for hospitals.

1.5 DEFINITION OF TERMS

The definition of the important terms used in the study are given below:
COST

Cost is "the amount of expenditure (actual or notional) incurred on, or attributable to, a given thing". The constituent elements of cost include the cost of materials and supplies used and consumed by an organisation, the cost of labour engaged by it and the cost of various services utilised by it. Although there are different conceptions of cost, the one common concept applicable to all types is, "the cost which is represented by the resources that have been or must be sacrificed to attain a particular objective".

HOSPITAL COST

Hospital cost represents the cost of taking care of an average patient for one day. It is the cost of providing various services to the patients. It is also the cost of operating the hospital.

COST ACCOUNTANCY

Cost Accountancy is "the application of costing and cost accounting principles, methods and techniques to the science, art and practice of cost control and the ascertainment of profitability. It includes the presentation of information derived there from for the purpose of managerial decision-making."

20. Institute of Cost and Management Accountants, op. cit.
COST ACCOUNTING

Cost Accounting is "the process of accounting for cost from the point at which expenditure is incurred or committed to the establishment of its ultimate relationship with cost centres and cost units”.

COSTING

Costing is defined as, "the techniques and processes of ascertaining costs".

COST CONTROL

Cost control is “the regulation by executive action of the costs of operating an undertaking, particularly where such action is guided by Cost Accounting”.

1.6 LIMITATIONS OF THE STUDY

The study is limited to private hospitals in Ernakulam district involved in allopathetic treatment. Government hospitals are excluded from the study for two obvious reasons:

1) Proper and sufficient records are not maintained in the majority of government hospitals and hence it is very difficult to collect the required cost and non-cost data, and

2) It is not possible for a single individual to apportion the total government expenditure among the various Ministries in order to get the share of health ministry and then to apportion again such share among all the government hospitals in the state.

The degree of specialisation, the nature of patient services and the technology used differ from hospital to hospital. In order to study all the varieties of patient services available in different hospitals, each hospital should be treated as a separate and distinct unit of study. Further, Ernakulam District has the best of the medical institutions available in the private sector in the State. This is the reason why one district, especially Ernakulam, is selected as the area of census study.

The study is further limited to those private hospitals having 100 or more beds to accommodate in-patients at a time. This is done because a Cost Accountancy System gives better results in medium and large sized hospitals. It is a known fact that a cost system is worth its installation only in an organisation where the volume of activities are sufficiently larger.

General hospitals are taken for the study for the reason that almost all the types of hospital services are rendered only in general hospitals. General hospitals provide the scope for applying the costing principles and techniques to all the different types of hospital services. Speciality hospitals restrict their services to one or two specialities and hence do not serve the purpose of the study.

Finally, cost analysis is not done for four hospital departments, viz, Transport, Canteen, Blood Bank and Mortuary. While Transport and Canteen services have their own independent and developed cost systems, Blood Bank and Mortuary are not common to all hospitals. Further, the cost of certain highly skilled, most advanced and specialised operations and processes like By-pass Heart Surgery, Kidney Transplantation, Dialysis, etc., are not computed since these are not common in all hospitals.
1.7 **SCHEME OF PRESENTATION**

The results of the study have been presented in Eight Chapters as shown below. The division into chapters has been made on a functional basis. The findings and recommendations relating to each function are given together in the same chapter rather than grouping all the recommendations together at the end. The format of the interview schedule and selected bibliography are shown as appendices.

Chapter 1 introduces the problem under study and explains the objectives, limitations and the methodology adopted to analyse and solve the problem. It also reviews the literature relevant to the problem and defines the terms used for the study. Chapter 2 deals with the important features of Departments, Management and Accounting in Hospitals. The necessity and relevance of Cost Accountancy in hospitals are also explained in this chapter. Chapter 3 lays down the Cost Accounting procedures in respect of Hospital Materials and Supplies, Hospital Labour and Hospital Other Expenses. The Hospital Cost Book-keeping suggested in the chapter completes the Cost Accounting procedure. Chapter 4 describes the Cost-Finding procedure to compute the cost of various Hospital Services. Chapter 5 suggests the important cost control techniques that should be applied in hospitals, while Chapter 6 deals with special cost techniques which improve the efficiency of Hospitals. Chapter 7 explains the Hospital Information System and Chapter 8 ends with conclusions, recommendations and suggestions for future research in the area of present study.