CHAPTER I
INTRODUCTION
MEANING & DEFINITION OF HEALTH

Health is one of the most important factors that influence the functional system of every individual and the standard of living of people in the society. There is also at present, a pronounced awareness of the importance of the geographical aspects of human health. The approach to definition, the first obstacle, Veena Das (1990) says is "the fact that we are made aware of health mostly in its absence". She quotes Satri's contention that reflects consciousness of the body becoming possible only when the body reveals its character through illness. From Hippocrates (460-359 BC), came the theory of the four humours which held the essential elements of the body to be phlegm, blood, yellow bile and black bile and other diseases that result from improper balance between these substances.

This theory dominated medical thought until the sixteenth century. The idea that health means "absence of disease" (also known as the biomedical concept) got more strength with the germ theory of disease advanced by Louis Pasteur (1822-1895). It was the beginning of the science of bacteriology and its applications in industry as well as in public health and medicine. The bio-medical concept of health dominated medical thought at the turn of the twentieth century. The chief merit of the biomedical concept of health in its scientific characterization of medicine and with it human health. According to Webster, health is the condition of being sound in body, mind and spirit especially from physical disease or pain. Health is a state of complete physical, mental and social well being and not merely an absence of disease or infirmity.

Health is now recognized commercially as an important index of employment. The significance and planning strategies and academic discussions has been aptly realized in developed as well as developing
economics according to 1948 United Nations Universal Declaration of Human Rights. Thus every one has the right to a standard of living adequate for the health and well-being of himself and of his family including food, clothing, housing and medical care and necessary social services and the right to security event of sickness, disability, widowhood, old age or other circumstances beyond his control. Motherhood and childhood critically need special care and assistance. Thus the enjoyment of the highest attainable standards of health is one of the fundamental rights of every human being without distinction of race, religion, and political belief, economic or social conditions. The very objectives of WHO is the attainment by all people of the highest level of health.

Quality of life and population of any society depends upon the status of infrastructure, which consists of housing pattern, health and sanitation, transportation and communication, power and natural resources and social fabric of the society, the state of infrastructure of various forms change from one society to another society. It also varies from rural to urban sections.

HISTORY OF MEDICINE IN DIFFERENT COUNTRIES

1. **Chinese Medicine:**

Chinese Medicine claims to be the world's first organized body of medical knowledge dating back to 2700 BC. It is based on two principles, the Yang and the Yin. The Yang is believed to be an active masculine principle and the Yin a negative feminine principle. The Chinese were early pioneers of immunization. They practised vaccination to prevent small pox. To a Chinese “the great doctor is one who treats not someone who is already ill but some one not yet ill”. The Chinese have great faith in their traditional medicine, which is fully integrated with modern medicine. The Chinese system of bare foot doctors and acupuncture has attracted worldwide attention in recent years.
2. **Egyptian Medicine:**

A lot is known about ancient Egyptians because they invented picture writing and recorded their designs on papyrus. In Egyptian times, the art of medicine was mingled with religion. Egyptian physicians were co-equals and priests, trained in schools within the temples. They often helped priests care for the sick who were brought to the temples for treatment. There were no practical demonstrations in anatomy. Egyptian religion enjoyed strict preservation of human body. Egyptian medicine reached its peak in the days of Imhotap (2800 BC) who was famous as a statesman, architect, and builder of the step pyramid at Saggarale. Imhotep was considered both a doctor and divinity. There were eye specialist and dentists. All these doctors were officials paid by the state. According to Homes, the doctors of the ancient world considered as the Egyptians to be “the Best of all”.

3. **Mesopotamian Medicine:**

Contemporary with ancient Egyptian civilization, there existed another civilization in the land which lay between the Euphrates and Tigris rivers. Mesopotamia has been often called the “cradle of civilization” even 6000 years ago. The ancient Mesopotamia basic concept of medicine was religiously taught and practiced by herb doctors, knife doctors and spells doctors– a classification that roughly parallels our internists, surgeons and psychiatrics. Mesopotamia was the cradle of magic and necromancy. The oldest medical prescription comes to us from Mesopotamia dating back 2100 BC.

4. **Hammurabi:**

A great king of Babylon who lived around 1000 BC formulated a set of drastic laws known as the code of Hammurabi that governed the conduct of physicians and provided for health practices. Doctors whose proposed therapy proved wrong run into the risk of being killed. Laws relating to medical practices, including fees payable to physicians for
satisfactory services and penalties for harmful therapy which are contained in the Babylon code of Hammurabi.

5. Greek Medicine:

The classic period of Greek medicine was between 460-136 B.C. The Greeks taught men to think in terms of 'why' and 'how'. An early leader in Greek medicine was Aesculapius (1200 BC), bore two daughters—Hygiea and Panacea. The medical historian Douglas Guthrie has reminded us of the legend that Hygiea was worshiped as the Goddess of health and Panacea as the Goddess of medicine.

The greatest physician in Greek Medicine was Hippocrates (460-370 BC), who is often called the "Father of Medicine". He was born on the little island of Coos, in the Aegean Sea. He studied and classified diseases based on observation and reasoning. He challenged the tradition of magic in medicine and initiated a radically new approach to medicine applications of clinical methods in medicine.

Outstanding among post Hippocratic medical entries were Alexandria's huge museum, the first university in the world which sheltered a library containing over 70,000 books. To this house of learning came eminent men between 300 BC and 30 BC. Thousands of pupils matriculated in the school of Alexandria, which replaced Athens as the world's centre of learning. In short, the Hippocratic school inspired the Alexandria school and also the Arabo-Persians and thus changed the destiny of medicine by separating it from magic and raising it to the status of science.

6. Roman Medicine:

By the first century BC, the centre of civilization shifted to Rome. The Romans borrowed their medicine largely from the Greek whom they had conquered. While the policies of the world became Roman, medicine remained Greek. In the political philosophy of the Romans, the state and not the individual were supreme. The Romans were more practical minded people than the Greeks. They had a keen sense of
sanitation. Public health was born in Rome, with the development of both sewers and aqueducts. The Romans made fine roads throughout their empire, brought pure water to all their cities through aqueducts, drained marshes to combat malaria, built sewerage systems and established hospitals for the sick.

An outstanding Roman practitioner was Galen (130-205 AD) who was born in the Greek city of Pergamon in Asia Minor. He was a physician to the Roman Emperor, Marcus Aurelius. His important contribution was in the field of comparative anatomy and experimental physiology.

By the time of middle ages, with the fall of the Roman Empire, the medical schools established in Roman times also disappeared. During this period, Europe was ravaged by many diseases and pestilences, plague, small pox, leprosy and tuberculosis. The practice of medicine reverted back to primitive medicine dominated by superstitions and dogma.

When Europe was passing through the dark ages, the Arabs stole a march over the rest of the civilization. They translated the Greek and Roman medical literature into Arabic and helped to preserve the ancient knowledge. Borrowing largely from the Greek and Romans, they developed their own system of medicine known as the Unani system of medicine. They founded schools of medicine and hospitals in Baghdad, Damascus, Cairo and other Muslim capitals.

During the turbulent middle ages, the spread of Christianity led to the establishment of hospitals and early medical hospitals rarely specialized in treatment of the sick. Usually the sick were received for the purpose of supplying their bodily wants and catering to their spiritual needs. The first hospital on record in England was built in York in 937 AD. With the growth of medicine, a chain of hospitals, sprang up from Persia to Spain. There were more than 60 in Baghdad and 33 in Cairo. Some hospitals like Cairo’s Al Mansur had separate departments for various diseases, wards for both sexes, fountains to cool fever patients, libraries, musicians and story tellers for the sleepless.
Johanna Peter Farm, a health philosopher of his time, conceived public health as good health and that the state is responsible for the health of its people. The Public Health Act of 1848 in England was a fulfillment of his dream about the state's responsibility for the health of the people. Cholera which is often called the father of "Public Health" appeared time and again the western world during the 19th Century. An English epidemiologist John Snow studied the epidemiology of cholera in London from 1848 to 1854 and established the role of polluted drinking water in the spread of cholera in 1856.

**Preventive Medicine**

Preventive medicine really dates back to the 18th Century. It developed as a branch of medicine distinct from public health. Curiously it came into existence even before the causative agents of disease were known. According to James Lind a naval surgeon, identified the menace of scurvy in 1753. Edward Jenner of Great Britain, a pupil of John Hunter discovered vaccination against small pox in 1796. These two discoveries marked the beginning of a new era of disease prevention by specific measures. However, preventive medicine got a firm foundation only after the discovery of causative agents and the establishment of the germ theory of disease. The latter part of the 19th century was marked by such diseases in preventive medicine as Pasteur's, anti-rabies treatment (1883), cholera vaccine (1892), diphtheria anti-toxin (1894), anti typhoid vaccine (1898) and anti-septics and disinfectants (1827-1912).

The dichotomy of medicine was in terms of curative medicine and public health. Preventive medicine was evident at the close of the 19th century. After 1900, medicine moved faster towards specialization and scientific approach to disease. The pattern of disease began to change with the control of acute infections and acute infectious diseases called modern such as cancer, diabetes, cardio vascular disease, mental illness and accidents. These became into prominence and have become the leading causes of death in industrialized countries. These diseases
could not be explained on the basis of the germ theory of disease nor treated with "magic bullets"; the realization began to dawn that there are other factors of causes in the etiology of diseases, namely social, economic, genetic, environmental and psychological factors which are equally important. Most of these factors are linked to man's life style and behaviour.

At the beginning of the 20\textsuperscript{th} Century, a new concept of health promotion began to take shape. It was realized that public health had neglected the citizen as an individual and that the state had a direct responsibility for the health of the individual. Consequently, in addition to disease control activities, one more goal was added to public health— that of health promotion of individuals.

According to C.E.A. Winslow, one of the leading figures in the history of public health, defined public health as "the science and art of preventing diseases, prolonging life and promoting health and efficiency through organized community effort". This definition summarizes the philosophy of public health which remains largely true even today.

**HISTORY OF HEALTH SERVICES IN INDIA**

The earliest civilization in India of which we have archaeological evidence centered on Mohenjo-Dara and Harappa cities of the Indus valley, which flourished from about 2500 to 1500 BC. An astonishing feature of this pre-Aryan urban culture was its advanced system of public sanitation. There were numerous wells, bathrooms, public baths, sewers and chutes for calling. Streets were laid out in regular fashion, and houses were well built and ventilated. About 1500 B C, the Aryans invaded the Indus Valley from the northwest and drove the earlier inhabitants down into the Indian sub-continent. These Aryan conquerors brought with them the basis for the subsequent religious and cultural development of India.

Indian medical practices were gradually dispersed all over Asia, including the south-east Indonesia, Tibet and Japan. Furthermore, the translation of the Ayurvedic literature into Persian and Arabic in the
eleventh century AD led to further spread of Indian medicine. The medical systems of Indian in origin have been Ayurveda and the Siddha systems. Ayurveda is being practised throughout India, but the Siddha system is practised in Tamil speaking areas of South India. Ayurveda by definition implies the “knowledge of life” or the knowledge by which life may be prolonged. Its origin is traced back to the Vedic times, about 5000 BC. During this period, medical history was associated with mythological figures, sages and seers. Dhanvanthri, the Hindu god of medicine is said to have been born as a result of the churning of the oceans during a “tug of war” between gods and demons. According to some authorities, the medical knowledge in the Atharvane veda gradually developed into the science of Ayurveda.

In ancient India, the celebrated authorities in Ayurvedic medicine were Atrey, Charaka, Susruta and Vaghbhatt. Atrey (about 500 BC), is acknowledged as the first great Indian physician and teacher. He lectured in the University of Takshashila, about 20 miles west of modern Rawalpindi. Ayurveda witnessed tremendous growth and development during the King Ashoka’s time. A 12th century copper figurine showed Kali, goddess associated with disease, death and destruction who as Parvathi was consort of Shiva, god of destruction and regeneration.

Ayurvedic medicine was based on a vast literature which included not only the Vedas and their later commentaries, (the Brahmins, Aranyaaks and Upanishads), but also a body of medical writings by many contributors like Charaka and Susruta. Estimates have varied widely on the dates, first century AD for Charaka and the fourth century for Susruta.

Many off shoots were developed from Hinduism and Buddhism. For example Yoga, a theistic philosophy which taught its devotees through exercise, to suppress all activities of the body, mind and will so that the self would be liberated.

Methods of diagnosis included magical as well as rational approaches. Omens played an important role. The flight of birds, the
sound of nature and many other observations were interpreted in that 
domain, as well to the severity of the illness. Nevertheless, the patient 
was given intensive scrutiny especially with regard to his sputum, 
urine, stool and vomits. Diabetes was detected by the sweet taste of a 
patient’s urine. The pulse classified into an elaborate system, was also 
an important diagnostic and prognostic tool. Charaka summarized all 
the attributes of a good hospital, including location in a breezy spot, 
free of smoke and protected from the sun, smells and objectionable 
oises. Details of equipments and needs were described even to the 
extent of proper brushes and brooms. He also discussed on appropriate 
food supply and the availability of drugs, prices, and cooking areas. The 
personnel should be clean, well behaved and able to wash and care for 
the patients. The wellbeing of the ailing was also considered with 
provision for attendants who could distract the patient by recitation, 
conversation and entertainment. The hospital that he pictured was 
easily a model for all to emulate in any times.

Judging from the written records, epidemics and illness have 
been frequent throughout India’s history. There is evidence of malaria, 
dysentery, cholera, small pox, typhoid fever, plague, leprosy, 
tuberculosis as well as multitude of other catastrophic diseases such as 
mental illness, blindness, hepatitis, pulmonary infections, neurological 
disorders, parasitic infestations and other pathologic conditions.

Role of Government

Public health activities now include efforts to reduce pollution of 
air, water and land. Along with improved nutrition and inoculation 
against major infectious diseases, these collective activities account for 
most of the decline in mortality and morbidity rates that have occurred 
over the past century. The role of government extends far beyond the 
provision of traditional public goods. In his classic article, Kenneth 
Arrow (1963) explored a variety of reasons why private arrangements 
and government participation in the production and allocation of health 
care services are so different from those attending the production and
allocation of most other commodities. On the distributional grounds, the proponents of government intervention establish that redistribution is desirable and also that manipulation of the price of a particular commodity is a more efficient and politically more feasible way of accomplishing redistribution objectives than direct income supplements through taxes. The absence of purely comparative conditions in large modern economies is easy to document, but the costs of collective intervention are not so easy to measure.

If government were to be uninvolved in the production and distribution of health care services and research as they are in production and distribution of ready made garments the market for health care services and research would tend to be different with inefficiencies. This aspect has made collective interventions to be attractive.

Health Services

The term health and family welfare services covers a wide spectrum of personal and community services for treatment of disease, prevention of illness and promotion of health. The purpose of health services is to improve the health status of population. For example, immunization of children can influence the incidence/prevalence of particular diseases and provision of safe water can prevent mortality and morbidity from water borne diseases. The care of pregnant women and children would contribute to the reduction of maternal and child morbidity and mortality. The health services must reach the social periphery, equitably distributed, accessible at a cost the country and community can afford and socially acceptable. All these are ingredients of what is now termed primary health care which is seen as the way of health. Health services can also be seen as essential for social and economic development.

Health services are designed to meet the health needs of the community through the use of available knowledge and resources. It is not possible to define affixed role for health services when the socio-
economic pattern of communities differs so much from each other. Health services are delivered by the health system which constitutes the management sector and involves organizational matters. Two major themes have emerged in recent years in the delivery of health services that health services should be organized to meet the needs of entire population and not merely selected groups and these services should cover the full range of:

1. Preventive Health Services.
2. Curative Health Services.
3. Rehabilitation Health Services.

**Preventive Health Services**

The goals of medicine are to promote, to preserve and to restore health when it is impaired and to minimize suffering and distress. These goals are embodied in the word “prevention”. Successful prevention depends upon knowledge of causation, dynamics of transmission, identification of risk factors and risk groups, availability of prophylactic or early detection and treatment measures, organization for applying these measures to appropriate groups and continuous evaluation and development of procedures applied.

a. Primary Prevention: Primary Prevention as “action taken prior to the onset of a disease, which removes the possibility that a disease will occur. It signifies intervention in the pre-pathogenesis phase of a disease of health problem or other departure from health. Primary prevention may be accomplished by measures designed to promote general health and well being and quality of life of people or by specific protective measure. Primary prevention is far more to averting the occurrence of disease and prolonged life. It includes of ‘positive health’, a concept that encourages achievement and maintenance of an acceptable level of health that will enable every individual to lead a socially and economically productive life. It concerns an individual’s attitude towards life and health and the initiative he
takes about positive and responsible measures for himself and his family and his community.

The concept of primary prevention is now being applied to the prevention of chronic diseases such as coronary heart disease, hypertensions and cancer based or elimination or modification of risk factors of disease. The WHO has recommended the following approaches for the primary prevention of chronic diseases where the risk factors are established

i. Population strategy

ii. High risk strategy

b. Secondary prevention – Secondary prevention can be defined as “action which halts the progress of a disease at its incipient stage and prevents complication”. The specific interventions are early diagnosis and adequate treatment, by which, secondary prevention attempts to arrest the progress of the diseases, restore health by seeking out unrecognized diseases and treating them before irreversible pathological changes take place. It may also protect others in the community from acquiring the infection and thus provide secondary prevention for the infected individuals and primary prevention for their potential contacts. Secondary prevention is largely the domain of clinical medicine. The health progress initiated by governments is usually at the level of secondary prevention.

c. Tertiary Prevention- when the disease process has advanced beyond its early stages it is still possible to accomplish prevention by what might be called tertiary prevention. It signifies intervention in the later pathogenesis phase. Tertiary prevention can be defined as all measures available to reduce or limit impairments and disabilities, minimize suffering caused by existing departures from good health and to promote the patients adjustment to irremediable conditions. For example,
treatment taken in the natural history of diseases may prevent regular and limit disability.

**Curative Health Services:**

Curative Health Services depend on various types of medicine. Although curative medicine is thousands of years old, modern disease as we know today is hardly 100 years old. Its primary objective is the removal of disease from the patients. It employs various modalities to accomplish this objective. In the middle of the 20th century, a profound revolution was brought in allopathic medicine which has been defined as "treatment of disease by the use of a drug which produces a reaction that itself neutralizes the disease" by the introduction of antibacterial and antibiotic agents.

**Rehabilitation Health Services**

Rehabilitation has been defined as "The combined and coordinated use of medical and social, educational and vocational measures for training and retraining the individual to the right possible level of functional ability. It includes all measures aimed at reducing the impact of disabling and handicapping condition and at enabling the disability and handicapping condition and attempting the disabled and handicapped to achieve social integration. Social integration has been defined as the active participation of disabled and handicapped people in the mainstream of community life.

Rehabilitation medicine has emerged in recent years as a medical specialty. It involves disciplines such physical medicine or physiotherapy, occupational therapy, speech therapy, audiology, psychology, education, social work, vocational guidance and placement services. The following areas of concern in rehabilitation have been identified:

i. Medical Rehabilitation – restoration of function

ii. Vocational Rehabilitation – restoration of the capacity to earn a livelihood
iii. Social Rehabilitation - Restoration of family and social relationship.

iv. Psychological Rehabilitation - Restoration of personal dignity and confidence.

In recent years, there has been a good deal of fresh thinking on the subject of rehabilitation, because of the success achieved in treating patients on domiciliary lines without interfering with this normal work and life. The proportion of patients who need rehabilitation and work under sheltered conditions is becoming less and less. The groups that need rehabilitation are those who are chronically ill. Some of those who had less reaction may require rehabilitation to suit their physical and mental abilities.

Surveillance is an integral part of any effective tuberculosis progression. It should be countered with two distinct aspects –

1. Surveillance of the tuberculosis situations. For example, by measuring the "Annual infection rates" which will guide the epidemiologist and health administrator by indicating whether the TB Problem is static increasing or decreasing and Surveillance of control measures applied such as BCG Vaccination and chemotherapy etc. and the diseases operate.

**Immunizing Health Services:**

Immunizing Health Sector may be classified as vaccines, immunology and antisera. The immunizing agents currently used are shown:
Vaccine is an immuno-biological substance designed to produce specific protective antibody and other immuno mechanism. Vaccines may be prepared from live modified organisms inactivated or killed organisms, extra bed cellular fractions are sub vaccines and recombinant vaccines.

Vaccines, BCG, measles, oral polio are prepared from like organisms which have been passed repeatedly in the laboratory in tissue culture or chick embryos and have lost their capacity to induce full term disease but retain their immunogenuity. Live organisms multiply in the host and resulting antigenic dose is larger than what is injected. Live vaccines engage certain tissues of the body, for example, intestinal mucosa by the oral polio vaccine and there may be other mechanisms such as the persistence of lateral virus.

**PRIMARY HEALTH SERVICES IN INDIA**

India has a well-built structure of health services. The Central Council of Health, set up in 1952, under Article 263 of the constitution
is concerned with promoting co-ordinate and concreted action between centre and states in the implementation of all programmes and measures, pertaining to the health of the nation. It has functions dealing with the financial, legal educational aspects of health, the state level organizations besides implementing national health programmes in the state, also study the specific health problems of the state and plan schemes for their solution. They too have legal powers as per the state acts. The district authorities maintain a hospital at the District Head Quarters and also control all health organizations at village, town and city limits, besides providing them the necessary aid and advice the districts have been split into blocks, the blocks comprise of town and the city (urban) and the villages (rural).

In the rural areas each block has a primary health centre (PHC), each PHC has a male and a female doctor, sanitary inspectors, health visitors, midwives and compounders. Each centre has its own dispensary and three sub-centres in a block. The PHCs are responsible for the provision of indoor and outdoor health services to the patients. In the cities / towns, the authorities look after the health services in their jurisdiction as per orders of district authorities. They have separate sections for different subjects such as cleanliness, water, health education and so on.

This is not all as far as the health structure in India is concerned; individuals, communities and voluntary agencies are also important spokes in the wheel of health structure in India. Individuals have served the cause of spreading, health consciousness among fellow beings not merely as physicians or nurses or doctors, but also as progressive people involved in propagating ideas of good health and co-operative actions for health, community health programmes are not new to India.

Even since the inception of the Community Development Programme, community endeavours for social actions have boosted governmental action in the provision of social services. In recent times, community health programmes have received a quick start. These
programmes include improved sanitation, cleaning of drains, prevention of breeding of mosquitoes and house flies, inspection of food articles sold to the public, environmental cleanliness, arranging talks and role plays pertaining to health awareness and so on. Community participation enables good executions of public health programmes such as National Malaria Eradication Programmes (1998), AIDS Control Programme (1986), Child Survival and Safe Motherhood Project (CSSM) (1992-93) etc. The WHO has suggested that primary health care could be called "Health by the people", the success story of the Alappuzha Community Development Society (CDS) of Kerala State can serve as a model for others.

Primary health care is a universal concept with infinite adaptability to any region, culture and stage of development. It appeals us because it speaks a common language. It represents values long held by nurse and it is immensely practical. Primary health care provides by involving all sectors of the community, through dealing with health. The environmental, social welfare, labour, housing, transportation, agriculture, the media to create a partnership among the family, health professions and governmental agencies. "Primary Health Care" was endorsed by all countries attending a world conference in Alma Ata, U.S.S.R. as the approach to reach the goal of Health for All - WHO-2000.

At present, the norm is that there is one sub-centre for every 5,000 population, one PHC for every 30,000 population and one CHC for every 1,00,000 population. In tribal and hilly areas, there is one PHC for every 20,000 population and one sub-centres for every 3,000 population. In total there are about 30,000 primary health centres and 1,31,000 sub-centres providing health services in rural areas of the country (Government of India 1997). In Karnataka, there are 8143 sub-centres, 1601 PHCs and 213 community health centres, 120 Urban Family Welfare Centres, 63 Health posts, which are functioning (Government of Karnataka 1998). All preventive, promotive and curative health services are provided to the people through there
centres. Through this network, the sub-centre workers particularly female health workers play a crucial role in providing linkage between the national health programme and its beneficiaries. The technical competence of these workers and their level of involvement in their work are crucial for the efficient implementation of health programmes.

The primary health care system, as conceptualized in India, proposes to implement the programme of health for all with the following objectives:

1. Primary health care is made universally accessible to individuals, families in the community. This accessibility refers to continuing and organized supply of care that is geographically, financially, culturally within easy reach of the whole community.

2. Primary health care has to be socially acceptable to all and implies that care has to be appropriate and adequate in quality to satisfy the health needs of people and has to be provided by methods acceptable to them within their social cultural norms.

3. Primary health care is made available to them through their full participation, the participation implies that the process by which individuals, families and communities assume that responsibility in promoting their own health and welfare.

4. Primary health care uses appropriate methods and techniques and with locally available supplies and equipments which together with the people can contribute significantly to solving a health problem.

5. Primary Health care is based on socially accepted methods, which the country can afford. Thus, self reliance and self determination are emphasized.

6. Primary health care, thus requires the development, adaptation and the application of appropriate health technology that the people can use and afford, such health care includes an adequate supply of low cost, good quality essential drugs, vaccines, biological and other supplies and equipments as well as counseling and advisory services to help people review their
health practices and make healthy choices. Primary health care includes functionally difficult supportive health care facilities such as health centres and hospitals.

The primary health approaches include dimensions of social and economic development. The services determined by social goods such as the improvements of the quality of life and maximum health benefits from healthier people who are more likely to be able to contribute social and economic development.

There are five basic principles of primary health care.

1. Equitable distribution
2. Manpower development
3. Community participation
4. Appropriate technology
5. Multi-sectoral approach

Health services must be shared equally by all people irrespective of their ability to pay and all the people rich or poor, rural or urban areas, must have access to health services.

Community participation is the process by which the community assumes the responsibility in promoting its own health and welfare.

Appropriate technology refers to health care that is relevant to people's health needs and concerns, as well as being acceptable to them. It includes issues of costs and affordability to services with the context of existing resources as the number and type of health profession also and other workers equipment and their pattern of distribution throughout the community. In some taluks, only few PHCs may be technologically good and private hospitals are highly competitive and technically forward.

Health Economics

Health economics is a branch of economics, concerns with the allocation of scarce resources that have alternative uses to produce
various commodities and distribute them for consumption, now or in the future, among various people and groups in society. It analyses the costs and benefits of improving patterns of resource allocation (Samuelson, 1976). Health economics is the application of the theories, concepts and techniques of economics to the health sector. It is concerned with such matters as the allocation of resources between health promoting activities, the quantity of resources used in health service delivery, the organization and funding of health service institutions, the efficiency with which resources are allocated and used for health purposes and the effects of preventive, curative and rehabilitation health services on individuals and society.

The scope of health economics is vast as well as narrow, depending on how health is defined and its determination and roles are viewed. In such a case, its determination include expenditures, not only on medical and public health but also expenditures on education, housing, nutrition, environment etc. It tends to be philosophical and transcends economic and social barriers. Health also may be defined in terms of life expectancy at birth (LEB) or in terms of infant mortality rate (IMR) or in terms of crude death rate (CDR) or in terms of mortality, morbidity and health related limitations. Simultaneously by weighing years of life according to illness and disability or in terms of disability adjusted life years (DALY), a measure that combines healthy life years lost because of premature mortality with those lost as a result of disability or in terms of quality adjusted life years.

Confining to a selected areas only, some economists consider expenditure on (a) Medical and public health, (b) Family Welfare, (c) Water supply and sanitation, (d) Nutrition, (e) Child and handicapped welfare as health care expenditure (Reddy and Selvaraju, 1993).

Health is multi-dimensional. It can be used as a dependant variable as well as an independent variable although casualty runs in both directions. As a dependant variable, it can be studied as a function of medical care. It can be studied as a function of medical care, income, calculation, age, sex, race, marital status, environmental function and
personal behaviour such as cigarette smoking, diet and exercise etc. 
The studies that make health the dependent variable take a production 
function approach with health depending on income, medical care, 
education and other inputs (Auster, Levecron and Sarachek, 1969). As 
an independent variable, it can be used to explain wages productivity, 
school performance, fertility and the demand for medical care. 

A general survey of some of the definitions suggests that health 
economics is the discipline that determines the price and the quantity of 
limited financial and non financial resources devoted to the care of the 
sick and promotion of health. It covers the medical industry as a whole 
and extends to such fields as the economic analysis of the cost of 
diseases of health programmes and returns from investment in medical 
education, training and research. The aim of economics applied to 
health field or health economics is to quantify over time the resources 
used in health service delivery and to organize, allocate and manage 
them in such a way that they are used for health proposes with 
maximum efficiency in preventive, curative and rehabilitative health 
services, so that to achieve maximal individual and national 
productivity. 

The health needs are infinite whereas, the resources are 
definitely limited and hence welfare governments. 

The demand for health and medical care in strict economic sense 
is a function of consumer's income, the price of medical care relative 
and try to obtain best of health out of the resources to the prices of 
other goods, and tastes and preferences of consumers, including their 
perceptions about health and health care. Mere expressions of health 
needs and wants do not become demand or effective demands, unless 
they are backed or supported by willingness our ability to pay for those 
needs and wants. The ability to pay and sacrifice for securing health 
services may be viewed in monetary as well as non monetary terms. 
When services are provided by the government, these should not be 
considered in strict economic sense, free or without cost.
Cost-Benefit Analysis

Cost benefit analysis as an economic technique applicable to health planning, management and evaluation, is the systematic comparison in financial and monetary terms of all the costs and benefits of the proposed alternate schemes with a view to determining (a) which scheme of combination will contribute most to achievement at a fixed given investment or (b) the magnitude of benefits that can result from schemes requiring the minimum investment. The concept was first used as an empirical technique in the United States in the 1930s and is now being widely used as an evaluation tool of many variables in developed and less developed nations.

Cost benefit analysis starts from its apparently 'easy-to-follow' methodology and means tabulation of costs and benefits. Apart from some confusion about how we plan values on costs and benefits, the question to whom the costs and benefits accrue is also unclear. In addition, the word social is sometimes added so that it is clear we are talking about social cost benefit analysis. However, the technique is widely accepted as having its foundations in the social welfare functions which is a key concept in neo classical economics in that the maximization of net benefits should be formally equivalent to the maximization of social utility of social welfare. The Social Cost Benefit Analysis is an important technique used in project formulation, appraisal and evaluation. Thus, it is an important facet of applied welfare economics which is increasingly being used for identifying and assessing public projects both in developing and developed countries.

Undoubtedly such market failures explain in part state intervention in health services. With such interventions most of the markets in which health care might have been traded simply do not exist. Hence, other procedures must be used for allocating resources, such as the cost-benefit approach. Ignorance, prohibition of competition, externalities, prices that do not represent opportunity costs, and therefore the potential for inefficiency are the norm, not the exception in health services.
There is a need to distinguish between technical efficiency, allocative efficiency and social efficiency. Technical efficiency is where the costs of producing a given output are minimized, or where output is maximized for a given cost. Allocative efficiency exists where it is not possible to make any individual better off without making some other individual worse off. The existence of perfect markets can be shown to lead to both technical and allocative efficiency given any initial distribution of endowments of resources. However, each different initial endowment will produce a different state of allocative efficiency; there is no uniquely allocatively efficient state. The choice between allocatively efficient states or between endowments must be made with reference to criteria other than efficiency.

If it is possible to undertake some change so that at least one person is better off without making anyone worse off then this must be a good thing and consequently ought to be undertaken. This is a value judgement but it is claimed one from which few people would dissent. These changes are Pareto Improvements. Public projects in which no one is made worse off are relatively rare, and in order to identify a larger range of projects that ought to be undertaken, the criterion of approval has been changed to that of potential Pareto improvement.

This is the corner stone of the cost benefit approach in that its aim is to identify projects that satisfy this criterion, as an aid to decision making. A project would satisfy the potential pare to improvement criterion if it could make at least one person better off and no one worse off, if the losers were to be compensated from the beneficiaries gains. Thus, the criterion is satisfied if the amount by which the beneficiaries gain exceeds the amount by which the losers lose. The aim is to maximize the total value of outputs produced, the achievement of which is social efficiency. This differs from allocative efficiency in that the latter implies no losers whereas the pursuit of social efficiency implies that there can be losers. If there is a potential pare to improvement and additionally compensation from beneficiaries
to losers is actually undertaken then social and allocative efficiency coincide.

The value of judgment trading off the distributional and efficiency effects can be built into the social welfare function, (SWF). Undertaking projects that fall into category (i) leads to the maximization of social welfare if the SWF is defined in terms of both efficiency and equity. Undertaking projects that fall into categories (ii) and (iii) leads to the maximization of social welfare only if the SWF is defined solely in terms of social efficiency, which is a special case of the SWF. Thus, the essential difference between social efficiency and social welfare lies in the incorporation of an equity criterion. Social efficiency takes no account of who gains which benefits or who bears which costs. Social welfare may take account of desert, need rights, justice, fairness and other criteria in judging projects by their equity as well as their efficiency.

There are three approaches to such valuation. First, there is the human capital approach which is the oldest and most easily applied. It equates the value of life of an individual with the present value of future lost output (as proxied normally by earnings and other labour costs). Some examples of this approach are provided in Jones-Lee (1976) and Mooney (1977).

The main comments to be made about the approach beyond its relative case of application are:

1. It measures livelihood rather than life per se.
2. It is acceptable only under a GNP based social welfare function.
3. Health care objectives are not normally couched in terms solely of GNP.
4. No attempt is made to reflect willingness to pay either on the part of potential victims or society more generally. While individuals’ earnings and income will affect their demand for safety (i.e. risk reduction) it is unlikely that there will be simple 1:1 accounting relationship.
5. In health service planning, which is the primary emphasis here, valuing life or even livelihood would seem not to be the issue. What is to be valued in this context is not life saving per se but more accurately relatively small reductions in risk of death.

6. Finally but relevantly such an approach can give economic appraisal in health care a bad name with an article in the prestigious British Medical Journal (Logan, Klien and Ashley).

A second approach is that of public behavioural or socially implied values obtained from teasing out the revealed preferences for safety in mortality reducing endeavours of the public sectors. It is based on the idea that for life saving programmes, the marginal cost per life saved (assuming like lives) should be the same if technical efficiency is to be pursued. If all lives were similar and there were no other outputs from these programmes, such as reduced morbidity, this would ensure that the maximize lives possible would be saved from the life saving budget.

While the willingness to pay approach is the one which is defended and applied by the majority of economists there are some critics of this approach. Thus Broome (1978) for example, sparked off a lively debate over the valuation of human life. Essentially Broome suggests that the willingness to pay criterion is unsatisfactory as the losers (i.e., those whose deaths are associated with any projects) cannot be compensated. The issue according to Broome rests upon the difference between ex ante and ex post valuations. Defendants of the willingness to pay approach have argues that Broome has misconstrued the arguments in that it is the risk of death ex ante that is being evaluated and the process of decision making is as important as the outcome when the decisions involve risk of death. Therefore, it is proper to allow individuals to attach their willingness to pay valuations to these risks.

Economic appraisal in healthcare weeks to determine whether particular projects involving the use of resource available for health care, are socially efficient and equitable. The problems involved in this
process form the subject of this section. The process can usefully be divided into a series of stages, which form a helpful sequential classification for the purposes of exposition.

For example, an economic appraisal of a heart transplant programme could examine the alternatives of:

- no programme
- a large programme
- a small programme
- a programme for young people only
- for one city
- for twenty cities
- for every city
- a programme this year
- in five years
- phased over several years
- blood pressure reduction as an alternative
- a smoking reduction programme as an alternative

These offers good potential which clearly requires clinical and epidemiological knowledge and economic appraisal in the health care sector.

Ultimately the appraisal object is to seek social efficiency and equity. However, where particular constraints are binding it may be sufficient or necessary to assess technical efficiency instead. Where there is a constraint on the resource budget, then seeking the most technically efficient i.e., maximum benefit way of spending it will be the objective. Where there is a fixed benefit or health effect to be achieved, the objective is to seek the most technically efficient i.e., least cost way. Questions of technical efficiency are addressed using cost effectiveness analysis (CEA). A particular form of CEA that is becoming more widespread in health care is where the benefits / health effects are expressed in terms of quality adjusted life years (QALYs) gained. This particular form of CEA is called cost utility analysis (CUA). IN CUA the health efforts of a project are expressed on a 0-1 scale of quality
adjusted life for each time period, and the tangible outcome / resource consequences in monetary terms. The overall effects of projects are set in terms of cost per QALY gained where all effects are ideally expressed in monetary terms.

Russel (1986) suggests that if less is spent on vacations and toys for children who are handicapped by measles complications then, the reduced expenditure represents an economic benefit. This is the sort of confusion that amongst other things makes people unsympathetic towards economic appraisal. The reductions in spending are better measure of the cost than the benefit. This sort of confusion may be avoided by strict and consistent use of the notion of opportunity cost rather than financial cost.

A benefit that has only recently been discovered (or at least only recently featured in evaluations of the effects of health care projects) is the value of information to patients. For example, Berwick and Wienstein (1985) found that mothers-to-be valued being able to visualize the fetus they were carrying, from ultrasound scanning, even when the scan was of no clinical value to the woman’s doctor. Strull, Lo and Charles (1984) indicated that patients being treated for high blood pressure valued being told of the future course of their condition. Only half however, wished to be involved in making decisions about the management of their condition. Thus, many patients may derive satisfaction from being able to pass such responsibility to their doctor.

Measurement of costs and benefits should allow for individuals aversion to risk in gaining benefits or preference for risk in accepting costs that is that the CV will diverge from the expected value of a risky benefit or cost. It is not known whether risk aversion is greater or less in the case of health improvements than for other economic commodities, or risk preference greater or less in the case of health deteriorations. It is also unknown how doctors aversions to or preferences for risk compare with those of patients. This last point will be of special importance if it is doctors who are making valuations on patient’s behalf.
Cost benefit analysis is a developing technique for directing government expenditures in no afferent channels whereas, the preceding chapter concerned private and public health care demand in the aggregate the largely at the allocation particular health care expenditure within the public sector.

Suppose that based on accident records, it is determined that circus can be saved by strategic location if blood banks through a city assume the following data with respect to the establishment of forces or if six rather than five bank are established additional circus can be sound with more banks located closer together but no one bank can save as many as there will be less work for.

In one study with decision makers in an NHS district in England, Ludbrook assisted in the formulation of the objective of the study, the health authority had decided to allocate an extra million dollar to community services and were puzzling over which set of norms to adapt as a means of spending this extra money. However, Ludbrook persuaded the authority to identify the sorts of community services that were just on the margin of being provided and to ask what the extra benefits of expanding these services would be. Thus, the objective was changed from being specified in terms of throughputs to outputs and became a CEA study seeking to maximize the benefits obtainable from the additional budget.

Feldstein et al. (1973) in their study of TB control went even further in their efforts to ensure that the maximum benefit was sought. They specified all the constraints that existed within the Korean health service, in terms of both money and resources, labour (doctor / nurse) availability and supplies of hospital facilities, drugs and so forth. The objective of the study was then one of optimization, subject to the constraints of local money and resource availability.

Mooney (1982) however, was able to rank by method the intangible costs of the different methods of screening for breast cancer. This enabled him to draw conclusions on the technical efficiency of the different methods without the need for a special survey or
measurement - rather the ranking in intangible costs was ascertained from the information supplied by medical staff involved.

The direct costs are the known medical costs which an illness entails. The indirect costs are the value of reduced output of workers resulting from the illness. At the extreme, if the illness causes death, then its indirect cost is the output the deceased would have accounted for had the person survived to retirement age. This output is measured by expected income.

If a benefit involves death preventions, there is a conceptual problem as to whether all of the output of the survivor should be considered as a social gain or only the output in excess of the goods required for his own self subsistence. Those who argue that all output should be included say that the ultimate purpose of output is the satisfaction it provides and the consumption of the surviving worker must be included as part of the total satisfaction. Those favouring the opposite approach believe that the economic benefit of a preserved life should be viewed from the standpoint of the rest of society, and that there is no economic benefit from the preservation of a consumption need.

The element of time must be considered in evaluating costs and benefits. Often costs will be incurred in the immediate future, while benefits will accrue over long periods of time. A dollar of cost now cannot validly be equated with a dollar of benefit earned ten years from now. In most economic transactions, the society does not consider future and present values as comparable. The interest rate or rate of discount expenses this time preference. An interest rate of 5% for example means that $1.00 now is equal to $1.05 in one year. In other words, a benefit which is valued at $1.05 in a year worth only $1.00 now. When money is borrowed, it is paid back with interest. The present value the amount borrowed is thus less than the future value, the amount borrowed plus interest. When a future benefit is estimated, this value must be converted to present value for comparison with costs.
In cost benefit analysis, health expenditure is based upon transfers among individuals. The benefits are the costs of medical treatment which would be averted and the increased productivity of those made healthier as a result of the programme.

**Explicit and Implicit Cost:**

The opportunity cost of a resource is a cost in the most basic form. While this particular definition of cost is the preferred baseline for economics in describing cost, not all costs in decision making situations are completely obvious, one of the skills of a good manager is the ability to uncover hidden costs.

The time costs, in money terms can be referred to as implicit cost of doing a CFA. The out-of-pocket costs on tuition and teaching materials are the explicit costs that a student incurs while pursuing CFA. Thus the cost of doing a CFA to a student is implicit costs (Opportunity Cost) and the explicit (out-of-pocket) costs.

The relevant costs for decision making purposes are those costs which are incurred as a result of the decision under consideration. The relevant costs are also referred to as the incremental costs. Costs that have incurred already and costs that will be incurred in the future regardless of the present decision are irrelevant costs as far as the current decision problem is concerned.

There are basically three categories of relevant or incremental costs. These are the present period explicit costs, the opportunity costs implicitly involved in the decision and the future costs implications that flow from the decision. For example, direct labour and material costs and changes in the variable overheads costs are the natural consequences of a decision to increase the output level. Also, if there is any expenditure on capital equipments incurred as a result of such a decision, it should be included in full, not withstanding that the equipment may have a useful remaining after the present decision has been carried out. Thus, the incremental costs of a decision to increase the output level will include all present period explicit costs which will
be incurred as a consequence of this decision. It will exclude any present period explicit cost that will be incurred regardless of the present decisions.

The opportunity cost of a resource under use, as discussed earlier, becomes a relevant cost while arriving at the economic profit of the firm. Many decisions are having implications for future costs, both explicit and implicit. If a firm expects to incur some costs in the future as a consequence of the present analysis, such future costs should be included in the present value terms if known for certain.

For many items that improve the quality of life, one can determine that they are worth from the actual prices paid in the market. A newspaper is worth at least 25% because consumers are willing to pay that much for it. An automobile is worth much more because it adds more to the quality of life. However, there is no market, and therefore no market price for better health. Clean air is a non-market good perhaps the quite essential public good. There is no commodity exchange or department store where air quality can be purchased; consequently economists have been forced to develop a severity of techniques to an approximate price of market.

In order to estimate the price, we would be willing to pay for cleaner air or health benefit estimation requires reliable data on current and further air cool health problem. Concentrations, population, size and specific quantitative relationships between different levels of pollution and frequency of adverse effects (Hall et al. 1992), while the basic approach to estimating health benefits is well established. Each aspects of assessing benefits prevent challenges.

**Valuing Health Benefits:**

Value measurements would represent all of the loss in quality of life that results from adverse health efforts, people avoiding these adverses to reduce medical costs, leisure time loss that results from avoiding or responding to the adverse health conditions. Discomfort inconvenience and fear resulting from the adverse effects, or effort to avoid or treat them and impacts on others as a result of the adverse
health effect have been experienced. The two general economic methods for measuring the value of changes in health related well-being are the cost of illness, (COI), method and the willing to pay (WTP) or willingness to accept (WTA) methods. While actual data on health care costs and wages are available, COI estimates are provided by economic or contingent valuation (CV) studies- for example, what is the best currently available range of measures for evaluating the benefits of improvements in health and air quality.

**Cost of illness Method:**

The cost of illness method was the first economic valuation method to be developed in the health and safety literature and involves the calculation of the rupee value of direct medical costs and cost wages due to illness. Some studies have utilized this method to value hospital admissions and other medical expenditure. In this method, the advantage of being based on real rupees spent to treat specific health efforts of the actual market value of work time includes only direct monetary losses; however, it does not include losses associated with the value of leisure time of school or unpaid work time of general necessity and therefore, does not capture all of the benefits of better health. The COI method is generally viewed as somewhat limited. It basically defines a measure of the financial impact of illness, not the change in well being due to illness. Since financial loss is only part of the effect on well being market based measures.

In certain situations, individuals face changes in environmentally related health risks. Here market transactions may be studied through differences in payments (prices and wages) as related to differences in risks. One can estimate the value to measure the exposed group to avoid or reduce risk. Studies using the medical approach can determine the implicit value for non-market characteristics, such as air quality in a neighbourhood, or the risk associated with a job.
Method of Comparison:

Several criteria are typically considered in determining which measures of value are most appropriate for estimating health benefits. First, the measure should be appropriate for the type of risk being studied. Risk can be differentiated by a number of characteristics, its size and direction; whether the risk is voluntary or involuntary and whether the harm can be prevented or has already occurred. Second, the value measure should provide the most comprehensive estimate possible by capturing complete gains or losses in well being. Third, when similar values are derived by more than one type of study, such measures are generally viewed as having a greater presumption of validity than those obtained solely from one method.

The cost benefit analysis is classified into three categories:

a. Cost estimate – The basic approach to cost benefit analysis is to estimate the monetary value of benefits associated with cost of proposed health expenditure. Much expenditure is allocated in such a way to maximize benefits.

b. Benefits measurements – Benefit are more difficult to measure than costs and no sufficient way has been designed to measure all benefits. In some cases, no attempt is made to place a monetary value on benefits but a benefit target is chosen which can be quantified. This estimated approach is called cost efficient study.

c. The marginal concept – Comparison of total cost with total benefit of a proposed expenditure is inadequate. The size of the expenditure can be varied with proposal for resources utilization, resource can be changed by small amounts and a progress studied. For example, following figures shows the level of economic activity, total cost, marginal cost, marginal benefit and demand.
In figures a and b, the total value equation seeks to reveal performances not captured in market prices. It reveals willingness to pay for those services. Figure a highlights total economic value for human made good as the sum of consumer and producer surplus which is larger than the total reverse accounted for by traditional methods (price times, quantity). Fig. b presents the case where the consumer surplus approaches infinity as the goods or services becomes scarcer.
and supply is fixed. This is the typical case of natural resources which can be an obstacle to estimate the total allocation values for different health related goods.

**What is cost?**

The economic activity of expending goods and services can be classified in many ways. In general, costs refer to the resources which are spent in carrying out health activities so far as the health care sector is concerned. It is to be understood that "unrealized or non-realized" benefits also count towards costs. An example could be the loss of productivity due to morbidity, disability or mortality.

In general, cost can be classified into two broad groups – capital costs and operating costs.

**Capital Costs:** These costs are borne in respect of the work load of any health centre and fixed. These may include –
1. Building i.e., the health centre, hospitals etc.
2. Major items of equipments – in order to complete the yearly costs of such items as building, refrigerator etc., it is convenient to express these in terms of replacement costs assuming a certain expected life for capital items like building etc. capital costs are also termed as capital expenditure, capital goods represents capital investment.

**Operating cost:** These costs are related to the level of activity in health institutions, some operating costs will change daily and some from ear to year. These operating costs include:
   a. Salaries, wages and allowances.
   b. Medical supplies drugs etc
   c. Transport, operating cost
   d. Maintenance and repairs
   e. Training
   f. Power
   g. Other miscellaneous items
Operating costs may also be seen as indirect or overhead costs, related to the expenses associated with utilities, administration and supervision. Other important concepts related to costs:

1. Marginal Costs:
   
   These refer to the amount, at any given volume output by which aggregate costs are changed if the volume of out patient is increased or decreased by one unit. These costs occur when one more unit is added. The concept of marginality is also applicable to benefits, value income and production. However, in case of production of health care services, it reflects the charges in total cost at a given scale of output when a little more or little less output is produced.

2. Social Costs:
   
   It is the cost of a health activity to the society and not merely or solely to the agency institution or sector carrying out the activity.

3. Unit cost as average cost:

4. Opportunity cost: This economic concept is quite important and casualty forgotten in costing. It is the value of the next best alternative forgone in order to achieve something. The economist's notion about opportunity costs implies that the cost providing one from health care should always be balanced against the benefits, which have to be sacrificed.

**BENEFITS:**

The benefits of a health programme or project are the desired efforts of the programme. Conversely the failure to use the available resources, technology etc. in the best possible way results in a loss to the project. For the programme, the institution and ultimately the community, this loss is expressed by the term opportunity cost mentioned above. This refers to a formalized way of comparing the advantages (benefits) and disadvantages (costs) of undertaking an activity, project or programme while computing the cost and benefits,
appropriate use is made of the principle of discounting whereby the worth returns received early during the life of a project is considered more than tat of later returns.

Health management is the systematic comparison in financial of monetary terms of all the costs and benefits of the proposed alternative schemes with a view to determining (1) which scheme or combination of schemes will contribute most to achievement at a fixed given investment and (2) the magnitude of benefits that can result form schemes requiring the minimum investment. Cost benefit analysis attempts to value all socially relevant outcomes in monetary terms. In day to day use, cost benefits analysis is primarily utilized to justify a particular health services programme. Although it is difficult to express all possible health and social C.B.A. help in taking technical decisions backed by economic logic, the ultimate unit of measurement in this technique is money value to society.

DIRECT AND INDIRECT COST AND BENEFITS:

Morbidity costs may be classified into two categories- one is direct and another indirect cost of illness. All costs necessary for treatment such as consultation charges, medicines and infections, diagnostic ward charges etc. are directly connected to treatment costs.

Secondly, there are certain costs which are direct costs by way of non-treatment costs like transport charges, boarding and lodging charges, rituals, performance, bribe paid to secure a hospital bed etc. The indirect costs of morbidity (unhealthiness) are loss of patient's work during the period of morbidity and payment to the substitutes or loss of work of accompanied person during morbidity. Finally, there were some problems in recording morbidity costs. First was that doctors fees was not always given by respondents separately because some times, doctors also dispense medicines. For the patient the payout to the doctor cannot be differentiated in a large number of cases.
Health care administration is a prime concern of a government. It is implemented through the primary health care institutions with a view to active "Health for All". However, it is not simply a welfare programme of the government. It implies a variety of economic concessions to the government in terms of huge cost involved and to the public, in terms of a variety of benefits derived. The economic viability of the programme can be ascertained on the basis of the cost incurred by the government towards PHC and the benefits accrued to the beneficiaries.

Any investment is incurred with a view to obtain a return which over balance the cost involved and other works benefits should always overweight the cost incurred on any programme. In the case of primary health benefits fall into two categories. Economic benefit and non economic benefit can be easily asserted in terms of monetary value whereas non economic benefits are national and hence can only be perceived.

Economic benefits can be ascertained in terms of savings. Accordance of further loss of days, income or other economic benefits and to ill health.

Non economic benefits are ascertained in terms of reduction of the number of cases, fitness, recovered after illness and requires of health by the people at large. These benefits are present at the ground quality and difficult to assess and entity in terms of quantitative measurement. However, it means a lot to the programmes of primary health care. Like west, benefit can also be decided into direct and indirect benefits. Direct benefit can either be economic or non economic, but visible to our ordinary perception. However, indirect benefit can only be ascertained by close examination of the reality by a critical analysis performance analysis will explain the indirect benefit systems.

The cost benefit analysis of primary health centres will have to be decided by the following theoretical propositions.
1. Higher the cost, greater is the qualitative character of the medicine and the treatment.
2. Higher the quality of medicine and quality of service, greater the benefits.
3. Higher the cost, lower the demand for its service in rural areas and among the poor people.
4. Lower the cost, higher the demand for such a services.
5. Lower the cost, lower the quality of item and quality of services. Hence, the benefit is also lower.