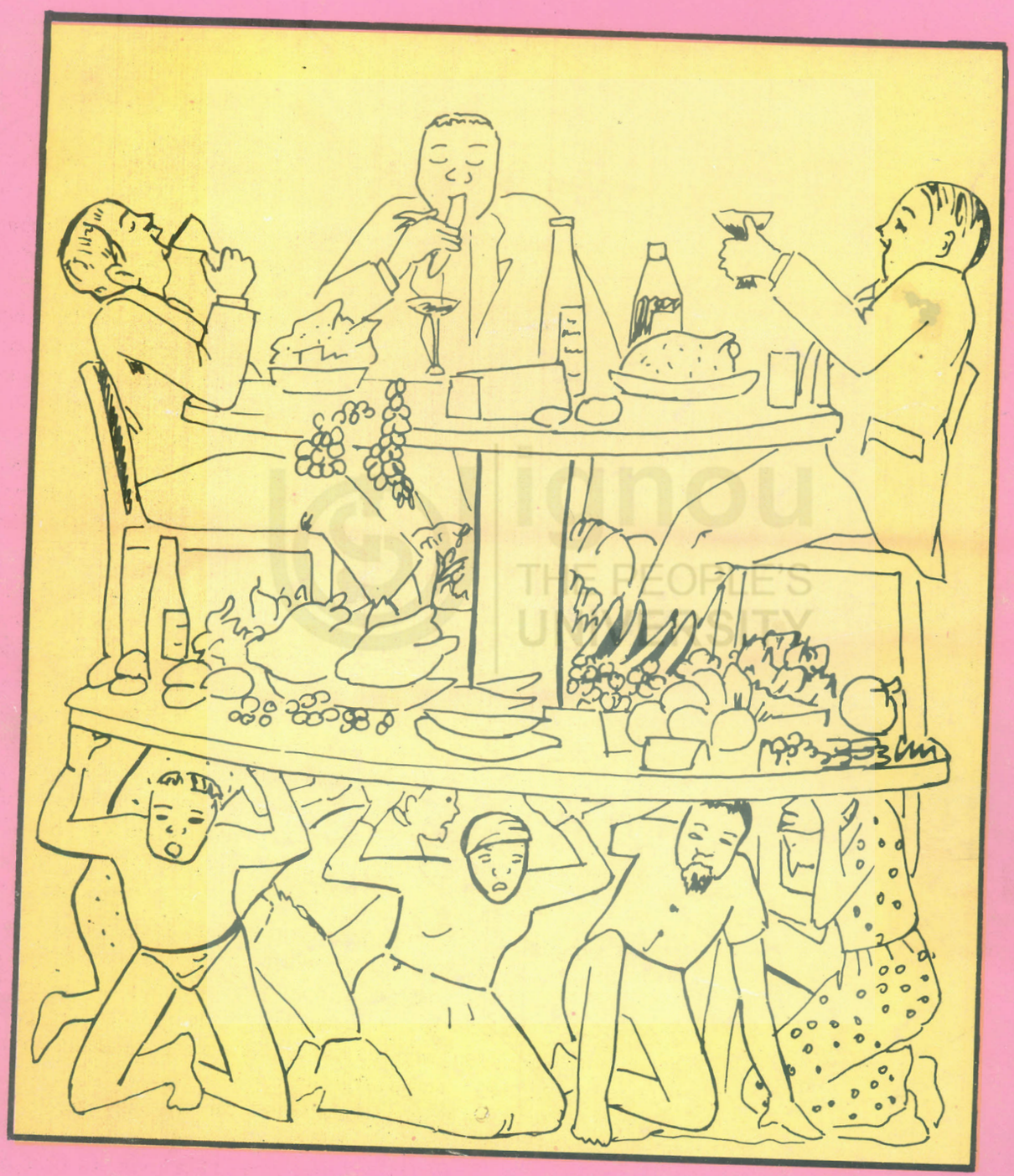
Indira Gandhi National Open University
School of Continuing Education

RD.D. 6
Rural Health Care



Health in Rural India

1

"शिक्षा मानव को बन्धनों से मुक्त करती है और आज के युग में तो यह लोकतंत्र की भावना का आधार भी है। जन्म तथा अन्य कारणों से उत्पन्न जाति एवं वर्गगत विषमताओं को दूर करते हुए मनुष्य को इन सबसे ऊपर उठाती है।"

– इन्दिरा गांधी

"Education is a liberating force, and in our age it is also a democratising force, cutting across the barriers of caste and class, smoothing out inequalities imposed by birth and other circumstances."

—Indira Gandhi

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Block

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HEALTH IN RURAL INDIA

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Vice-Chancellor, IGNOU

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JNU

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Associate Professor
JNU

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Reader,
School of Continuing Education
IGNOU

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JNU

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Assitant Block Editor
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R. Pillai

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INTRODUCTION TO BLOCK 1

Health is an important indicator of human development. Our survival is measured by the quality of life we lead. Therefore, health status is also considered an important indicator to assess the quality of life. But the question is, does the quality of life equal for all of us? The excruciating life pattern of the poor, particularly those who live in rural areas does indicate the wide gap that exists between them and the rich in terms of their health status.

We are introducing this block viz. Health in Rural India, as part of the Post-Graduate Diploma in Rural Development (PGDRD) as we believe that development of rural communities is largely determined by the improvements in their health status. We also believe that while development efforts lead to improvements in health status, every effort aimed at achieving better health status also promotes development. Because of such close interlinkages between health and development, we have made an attempt to potray the facets of rural development through the lens of rural health. Therefore, this Block can be more seen as a manifestation of rural India.

This Block consists of five units. In unit 1, we have attempted to explain the concept of health, epidemiology and the factors influencing health. Health being an integral part of development, the interlinkages between health and development is explained in unit 2.

In unit 3, attempts are made to provide a brief outline on the various health care interventions initiated since India's independence. Unit 4 is devoted to discuss the relationships between health and nutrition and the health and nutrition status of rural India.

When you begin to read unit 5, you may wonder why this unit finds a place in this Block as it deals with the models of health care in some of the countries which are far advanced than India. This we have done it purposely as we believe that enabling you to have a comparative picture will help you to understand the status of India's rural health better and more clearly.

We hope you will enjoy reading this Block. We also hope that you would be richly benefitted in knowing the status of India's rural health which will help you to take necessary steps to improve the health status of rural India at your level.

We wish you all the best.

UNIT 1 HEALTH : CONCEPTS AND COMPONENTS

Contents

1.0 AIMS AND OBJECTIVES

Of the many factors contributing to the development of humanity, health is considered very crucial. Therefore attempting to understand the meaning of health assumes significant importance. After reading this unit, you will be able to :

- understand the concept of health
- differentiate health from health care services and diseases
- understand the determinants of health
- identify the indicators of health

1.1 INTRODUCTION

All of us do understand what health means. However, if we are asked to define health in precise terms, we begin to realise how difficult a task it is. Such a difficulty arises as the indicators used to define health vary from community to community. This is also due to differences in the nature of health problems prevalent among different communities and countries. For example, in an affuluent or a rich country the major health problem may not be of diarrhoea where as it is a serious health problem in a poor country like India. Defining health is also determined by how people perceive health. However, such a complex situation should not stop us from making an attempt to evolve a broader understanding or perception of health. This, you would appreciate, is necessary as health is universally regarded as an important index of human development.

As you must have seen in the contents of this unit, we shall first discuss the concept of health and epidemiology. We shall also discuss in detail the natural history of diseases and how understanding of diseases is related to the understanding of health. Two important factors we need to focus while studying the meaning of health are determinants and indicators of health. This is dealt at length at the end of this unit. We shall begin by understanding how a broad view on the concept of health is evolved.

1.2 SOME CRITICAL ISSUES IN UNDERSTANDING HEALTH

In the study of health the most perplexing and ambiguous issue has been its definition. Often we come across phrases such as 'holistic health', 'community health', 'public

health', 'primary health care', 'total well-being' etc. This indicates that no universal definition of health has been arrived at yet. Therefore, Susan Rifkin, one of the well-known experts in the field of community health, writes that the unending debate on defining health has given birth to about 92 definitions. One of the main reasons for this inconclusive situation is the variety of approaches used to analyse and explain health.

1.2.1 Approaches

The approaches used to explain the concept of health can broadly be grouped under three categories. Following are the three approaches within which health is usually defined:

1. **Clinical-Medicine Approach** : This approach is used extensively in the health debate by the proponents of medical science. According to this approach, health is understood solely in relation to illness or disease caused by germs. This approach tends to have a uni-causal theory of disease causation, i.e. disease as a single determinant of health, which grew in the wake of the discovery of germs as causes of diseases in the late 19th and early 20th century. Therefore, according to this approach, diseases can be eradicated only through scientific medicine. In other words, a person can be healthy as long as there are medicines available to treat every disease or illness. Thus the main factor considered here for defining health is eradication of diseases through modern scientific medicine.

2. **Socio-Cultural Approach** : According to this approach the factors determining health are not merely the diseases and the availability of medicines to cure them, but the socio-cultural milieu in which the diseases occur on individuals and communities. Two views, one positive and another negative, are expressed in this context. The positive view is that people have historically evolved certain health care practices to deal with their health problems effectively. For example, the application of traditional medicines such as Ayurvedic, Siddha and Unani to prevent and cure certain diseases. These practices are rooted in the cultural fabric of people and the environment in which they live. The negative view is that people are ignorant and therefore they are diseased. Though factors such as illiteracy, superstitious beliefs do lead to ill-health, we can not blame the people alone for their illiteracy and superstitious beliefs and practices. Such factors are deeply rooted in poverty and unjust social order. If there are no schools and teachers and if the people do not get even one meal a day, it is unrealistic to expect them to be literate enough to take care of their health.

3. **Social-Medicine Approach** : Health status of a community, according to this approach, is often determined by the prevalent socio-economic structure. In any given economic structure, if the majority population, i.e. the landless labourers are paid only a meagre wage, they will always be in a state of 'ill health'. This is because, low income leads to low food intake which in turn results in erosion of immune power in the body. As a result, they are easily susceptible to diseases. Therefore, if the existing economic structure does not provide adequate income to the majority population, their health problems are bound to compound. This is to say that there is a close relationship between economic factors and health status which can be improved only through rise in the income level of the poor.

In order to create pro-poor economic structures, as this approach envisages, efforts must be initiated to organise the poor so that they begin to demand for a better deal in the process of production and distribution of goods and services. It is argued that even the existing health care services, though insufficient, must be accessible and available to the poor so that they can organise themselves for collective action. Only when the poor are able to have control over what they produce, we expect improvements in their health status.

This approach is quite critical of the dominant economic structure which is organised on the principles of capitalism. The proponents of social medicine approach argue that the major causes of health problems are rooted in the capitalist form of production. The following are some of the critical issues raised by the social medicine approach against the pattern of health care services provided in the capitalist communities. Some of the key principles of capitalism are 'profit motive' and competition. Therefore, even if sufficient health care services are provided to augment the health status of the workers, it is done primarily for increasing production and thereby profit. In other words, increased

production and maximisation of profit cannot be achieved if the workers often remain sick.

The principle of competition keeps people often divided. Therefore, in such an economic structure, it is quite difficult to bring people together. As long as the people are sharply divided, it is easy for the capitalists to have full control over what is produced and distributed. By doing this they will always be able to take care of their own health and the health of those who join hands with them.

In such an economic structure, even the health sector is viewed as a potential industry for profit making. Such a system portrays modern medical technology superior to the traditional system of medicine. Mass production of drugs (which are mostly non-essential), and medical equipments becomes a potential medical industry for profit. What is worst in this context is the debilitating dependency of the poor on the medical technology and service for the promotion of their health status.

These approaches indicate that the definition of health must be such that it must reflect most of the issues raised in all the three approaches. Against this backdrop, let us try to understand the concept of health.

Check Your Progress 1

Notes : a) Space is given below for your answers.

b) Check your answers with the ones given at the end of this unit.

1. List two important factors to which clinical-medicine approach attaches greater importance.

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2. What are the positive and negative views expressed in the socio-cultural approach?

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3. Why social-medicine approach is critical of an economic structure which is organised on the principles of capitalism ?

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1.2.2 Concept of Health

Before we begin to look into any commonly acceptable definition of health, let us understand this concept by negation.

1. Health is not only Absence of Disease or Illness

All of us, by and large, take our health for granted. It is only when we are ill or diseased do we wonder what is wrong with us. Now, these two terms, illness and disease, mean different things. You can, for example, be diseased without being ill although you cannot be ill and not diseased. To illustrate, it is possible to have a disease you are entirely unaware of. Yet a doctor may pronounce you diseased or unhealthy, indeed perhaps even a danger to the community.

In other words, the concept of illness is based on what can be called self-definition or subjective factors, whereas the concept of disease implies that there is some objective standard or definition compared to which you are declared either healthy or diseased.

2. Health is not only Availability of Curative Services

Health does not mean availability of medical and para-medical staff, hospitals and medicines to treat diseases. These facilities/services can only cure diseases, but cannot prevent or promote health. In some cases these facilities may be available, but not accessible to the poor. What is worst, in some cases they cause illness. For example, administration of a wrong injection may lead to deformity or even loss of life. The disease/ disability caused by medicine, according to Ivan Illich, is called 'iatrogenesis'.

3. Problems in Definition

How then is health defined ? All definitions, by and large, are imbued with problems. Nonetheless all societies have to decide within the constraints of knowledge, technology and resources, the level of health which it believes is ethically permissible or desirable in the population.

The most widely accepted definition is what is stated in the Constitution of World Health Organisation (W.H.O.), which defines health as follows :

> "HEALTH IS A STATE OF COMPLETE PHYSICAL, MENTAL AND SOCIAL WELL-BEING AND NOT MERELY AN ABSENCE OF DISEASE OR INFIRMITY".

Now, this definition has certain very important positive points to recommend.

1. Health is not defined in merely negative terms as the absence of disease; instead a more comprehensive definition is offered.

2. This definition draws attention to the various components of health. Often health is defined in its curative aspect alone. This definition, on the other hand, is more holistic for it implicates other, perhaps more significant, efforts at improving health and well-being.

However, critics of this definition point out that :

- This definition applies to individuals alone and that health, by its very nature, involves communities.
- This definition is static whereas health is a dynamic process. This definition does not take into account the fact that concepts of ill health and disease change over time in the same community and that it varies among different communities.
- That these concepts are abridged by not only the level of knowledge but also the availability of technology and resources. In other words, what is considered ill or diseased, may well depend on the availability of technology and resources in a society and that these are political decisions made by the concerned society.
- Political decisions are taken at various levels. At village level, for example, the common water tap may be installed at a place where the majority upper caste live. Similarly at the district level, the sanctioned mini-health centre or dispensary may

be located at a place which is decided by the local MLA. At the national level, from the budget allocated for health maximum may be spent on AIDS leaving little financial resources to combat diseases such as T.B., malaria and diarrhoea which still remain the major cause of mortality and morbidity in India.

- Every society has a host of health problems; there are also different kinds of diseases. However, which of these disease a given society deals with on a priority basis can be guided by considerations of epidemiology. (This term is defined in Section 1.3 of this Unit). Often other factors influence health intervention and outcome. A developing country may be faced with the problem of a high infant mortality; it could also have a certain proportion of cases of cancer. Epidemiologically the former would be the priority problem to be tackled. The type of health intervention required would be radically different from one based on hospitals which is more suited where the priority is cancer. The definition of health as given by WHO, being an ideal, does not throw light on issues discussed above.

4. What is Health After All ?

You must be still wondering, what is the best way to define health. Now, if you are at this stage, then we are sure that you have understood fully whatever you have read in this section so far. As you know, what we have attempted so far is not to define health but to enable you to understand some critical issues relevant to the understanding of the concept of health.Therefore, it may be appropriate to say that whenever we want to understand the meaning of health, the following factors must immediately come to our mind:

- Every person must be in such a position that her/his basic needs such as food, shelter and clothing are met.
- Every person has a right to demand equal opportunities for employment and just wages.
- The environment in which one lives must be such that it does not become a potential source for the cause and spread of disease.
- People must have the freedom to organise themselves for collective action aimed at improving their health status.
- Every person as far as possible, must be free from common preventable diseases.

Check Your Progress 2

Notes : a) Space is given below for your answers.

b) Check your answers with the ones given at the end of this unit.

1. List five major issues we have raised while discussing the concept of health.

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2. What are the factors we need to remember when we talk of health ?

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1.3 DEFINITION AND CONCEPTS IN EPIDEMIOLOGY

The concept of health can be understood better if we examine the term 'epidemiology'. The concept of epidemiology is closely linked to the understanding of health. This is evident from the definition and main features of epidemiology which are discussed below:

1.3.1 Definition

Epidemiology is defined as the study of distribution and determinants of disease frequency in man. In this definition the key words are distribution and determinants. Based on these two key words epidemiology is classified into two types. They are (i) descriptive epidemiology and (ii) analytic epidemiology.

- Descriptive Epidemiology : The study of distribution of diseases is normally known as descriptive epidemiology. It answers the following questions.
  - Who has the disease ? Person
  - What factors are associated ? Determinants
  - Where did the disease occur ? Place
  - When did the disease occur ? Time
  - How did it behave over time ? Distribution

The answers to these questions are brought together under the rubric of Descriptive Epidemiology.

- Analytic Epidemiology : The study of disease causation or the determinants of diseases is known as analytic epidemiology. The important question answered in this field of epidemiology is :
  - Why did the disease occur ?

The answers to this question come together under the rubric of analytic epidemiology.

1.3.2 Key Features of Epidemiology

From the description of the concept of epidemiology, we can derive the following key features.

- The unit of study is the population as a whole.
- It studies the natural history of disease in communities and in individuals.
- Health is seen as the outcome of a dynamic process. There is no single cause of disease. Ill health and disease occur due to complex and interactive causes — what is called the web of causation.
- The epidemiology method extends beyond the barriers of individual disciplines. In other words, it is inter-disciplinary. Social and economic forces which encounter health and disease are also seen as significant factors in the causative web.
- Epidemiology relies on quantification of various health problems and this helps in prioritisation.
- It helps us plan intervention at a stage in the natural history of the disease in a community to obtain the maximum benefit under a given set of circumstances.

1.3.3 The Epidemiology Triad

The concept of epidemiology and its relevance to the understanding of health will become more clearer if we understand the meaning of epidemiology triad.

We will first offer a brief example so that this concept is more easily understood.

Tuberculosis is caused by the microbe Mycobacterium tuberculosis. This is the agent of tuberculosis and humans are, for our purposes, the host.

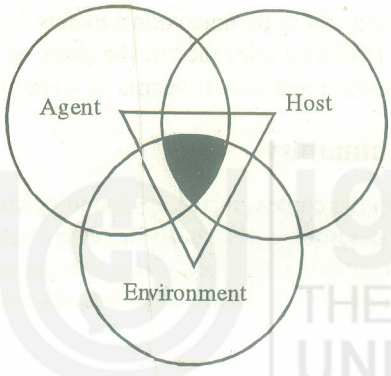
In the West, as improvements occurred in socio-economic conditions during the course of the 19th century, the importance of tuberculosis as a public health problem began to decline. This decline was not related to advances in medical technology but was a response to a broad range of factors such as improvements in nutrition, income, housing, sanitation etc. By the time advances in medical technology brought about specific preventive measures or treatment, the disease had ceased to be a public health problem.

In other words, the agent of tuberculosis is a necessary but not a sufficient condition for the occurrence of the disease. The interaction between the agent and the host is mediated largely by socio-economic, political and environmental factors.

This then helps us understand what is referred to as the **Epidemiological Triad**. This is the complex and changing inter-relationship between the Agent, the Host and the Environment which shapes the occurrence and distribution of diseases over time. Diseases do not occur, as it were, "naturally". The disease agent does not necessarily cause a disease in the host. It is only under a particular concatenation of environmental and socio-economic circumstances does the interaction between the agent and the host results in disease.

The interaction is most frequently depicted in the following manner.

Fig 1.1: The Epidemiological Triad



Source: Park J.E. and K.Park (1983) Text Book of Preventive and Social Medicine

1.3.4 Relevance of Curative Care in Epidemiology

Curing an individual suffering from illness or disease is a small part of the entire gamut of interventions at preventing disease and improving health in a community. This is not to deny the importance of curative care which not only alleviates suffering but also, in the case of communicable diseases, prevents the spread of the disease to other members of a community. It is nevertheless important to be aware of the limits to a curative approach or the clinical-medicine approach which we have discussed earlier. Within the epidemiological triad the environment is extremely important to disease causation. In such a situation, to cure individuals while not preventing disease occurrence by altering the environment means that the cured then returns to his untreated environment merely to fall prey to the same disease again. This is not only epidemiologically unsustainable but economically not cost-effective.

Though we understand the importance of germs to the causation of diseases, we now realise that a germ is a necessary but not a sufficient cause of disease occurrence. This is because diseases occur in the context of an epidemiological triad and have multiple causes. The clinical approach is thus considered epidemiologically untenable.

In this section, we have discussed the definition and main features of epidemiology. We must remember that the concept of epidemiology has relevance only in relation to the concept of health. In other words, the concept of epidemiology is discussed here to

provide a better understanding of the concept of health. As you have seen, even the definition given by WHO is quite vague and leads to many questions, some of which are answered when we begin to understand the meaning of epidemiology. Therefore, whenever we talk of health we should be able to remember that health is determined by many factors of which disease is only a part.

Check Your Progress 3

Notes : a) Space is given below for your answers.

b) Check your answers with the ones given at the end of this unit.

1. Fill in the blanks.

a) Epidemiology studies the ..... and ..... of disease frequency.

b) The study of distribution of disease comes under ..... epidemiology.

c) The study of disease causation comes under ..... epidemiology.

d) Epidemiological triad consist of Agent, ..., Environment.

1.4 NATURAL HISTORY OF DISEASE

Though the concept of health is not to be understood merely in terms of absence of disease, we can not entirely ignore its relevance in the study of health. Therefore, let us understand the meaning of disease and how it occurs in a community and in an individual.

1.4.1 Disease in a Community

Diseases, as we saw, occur in the context of the epidemiological triad — the interaction between the agent, host and environment. Underlying every condition of health or disease is the process of constant alteration as the agent, host and environment all evolve over time. Naturally then the occurrence and nature of disease in a community change over time.

This change over time in the occurrence and nature of a disease is what is referred to as the natural history of a disease in a community.

We noted in the case of tuberculosis in the West, the disease incidence (i.e. the number of new cases in a year) and the prevalence (i.e. the total number of cases over a period of time) came down beginning in the 19th century due to changes in the environment and the host. Other diseases like cholera, plague, and typhoid also disappeared from these countries in response to socio-economic changes which altered the epidemiological triad.

By and large, when a disease is new to a community, the incidence of the disease in the hitherto unexposed population is very high and so is the death toll. Small pox, for example, when it was introduced to South America by the Spanish, decimated the native population. Over time, however, the interaction between agent, host and environment alters so that the occurrence and severity of a disease also alters. For example, in India the nature and severity of cholera has altered significantly during the course of this century. Sometimes, however, why a disease disappears and reappears in a community, as in the case of plague in India, is a matter of speculation and research.

1.4.2 Disease in an Individual

It is important to understand that the natural history of disease in a community is entirely different from the natural history of disease in an individual.

Every condition of disease in a man or woman has its origins in other processes before the individual is involved. Thus precipitating and predisposing factors or causes are constantly operating in the occupational or living environment of the individual. The occurrence of disease in an individual has three stages. They are (i) pre-pathogenic stage, (ii) pathogenic stage and post-pathogenic stage.

(i) **Pre-Pathogenic Stage :** Heredity, social and economic factors or physical environment may be creating a disease stimulus before the individual and the stimulus interacts to produce disease. This preliminary interaction of potential agent, host and environmental factors in disease production is termed the **Pre-Pathogenic Period.**

(ii) **Pathogenic Stage :** The course of the disorder or disease in an individual from the first interaction with the disease causing stimuli to the changes that follow, or until equilibrium is reached, or recovery, defect, disability or death ensues is termed the **Pathogenic Phase.**

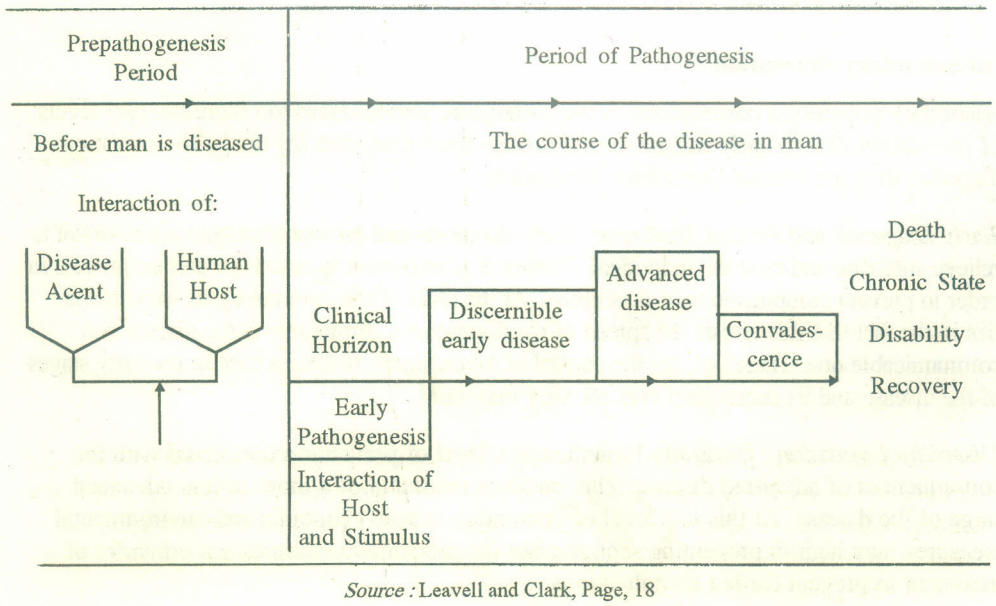
(iii) **Post-Pathogenic Stage:** The aftermath of this process in an individual is termed as **Post-Pathogenic Period.**

The pathogenic stage is normally characterised by three phases. They are (i) incubation period, (ii) clinical phase and the (iii) convalescent phase. These will be easier to understand with an example. An individual like you or me living under good living conditions may not be exposed to the germ of tuberculosis. These conditions constitute the pre-pathogenic period. Now, if you and I do in fact come in contact with the germ, our bodies self defense does not ensue. That is to say that even though the agent and host have interacted, disease does not necessarily ensue.

- **Incubation Period** : In some, however, the disease progresses. This period between the point of contact and progression is known as the incubation period. Associated with this are a complex of environmental factors. Not all of those who have the disease may feel unwell. In a fraction the disease produces some non-specific symptoms such as malaise or fever. The individual then feels ill. This is what is referred to as the prodromal stage of the disease in an individual. The symptoms of the disease are vague and the disease is not clinically diagnosable.
- **Clinical Phase** : At this point spontaneous healing occurs in a large majority of cases. In a small proportion the disease progresses and can be diagnosed clinically. In other words, the individual has reached the clinical phase and has specific symptoms such as cough, bloody sputum and chest pain. The point when the clinical horizon is reached is known as the Differential Point. During the clinical phase a trained person may diagnose, treat and cure the disease.
- **Convalescent Phase** : Untreated, after a period, the body's defense may still contain the disease while healing occurs and the individual is in the convalescent phase. This leads in the majority of cases to recovery. In a small proportion of individuals the disease may progress leading to death. In another small proportion of individuals the disease may become chronic. In another small proportion the individual recovers but this recovery is not complete and he or she may be left with a disability.

This entire process is known as the Natural History of Disease in Man and is depicted in the following figure.

Fig 1.2 : Natural History of Disease in Man



Source : Leavell and Clark, Page, 18

1.4.3 Levels of Prevention

Prevention assumes importance here as it corresponds to different phases of the natural history of disease. There are primarily three levels of prevention. This is most frequently depicted as follows.

Figure 3: Levels of Prevention

Phase of Natural History of Disease	Levels of Prevention	Functions
Pre-Pathogenic Period	Primary Prevention	Health Promotaion Specific Protection
Pathogenic Period	Secondary Prevention	Early diagnosis and treatment Disability Limitation
Post-Pathogenic Period	Tertiary Prevention	Rehabilitation

Curing an individual suffering from a disease is a small part of the entire gamut of interventions at preventing a disease. We shall now discuss the meaning of three levels of prevention viz., primary, secondary and tertiary.

(i) Primary Prevention

Primary prevention corresponds to the pre-pathogenic period. As mentioned in Fig.3 health promotion and specific protection form the main features of primary prevention. Primary prevention can be accomplished by a host of measures to promote optimum health in the population or by specific protection of an individual against disease agents or with the establishment of barriers against agents in the environment. They prevent the interaction between the agent and the host.

Health Promotion : The procedures used in health promotion are not directed with references to any particular disease or individual but serve to further general health and well-being in the entire population. This is most critical in the prevention of disease and includes social, economic and political action to improve the standard of living. Some of the procedures for health promotion are improvements in employment, income, nutrition, water supply, sanitation, housing etc. We saw for example that in the West during the course of the 19th and 20th Centuries, tuberculosis ceased to be a public health problem in response to improvements in standards of living. The prevalence of other infectious diseases (such as rickets and under-nutrition) also declined even as longevity of the population increased as Mckeown (1976) contends.

Specific Protection : Specific protection comprises the measures taken towards prevention of a disease in the conventional sense. It consists of procedures applicable to a particular disease or group of diseases to intercept disease causation. For example immunisation against tetanus in an individual should he or she come in contact with the disease agent. Specific protective measures are also applicable to the prevention of nutritional diseases and prevention of occupational diseases.

(ii) Secondary Prevention

Secondary prevention corresponds to the pathogenic period. Here too there are two levels of prevention viz. (i) early diagnosis and prompt treatment, and (ii) disability limitation. Together they are termed Secondary Prevention.

Early Diagnosis and Prompt Treatment : Early diagnosis and prompt treatment are essential to relieve suffering and cure the individual. Further, it is important to arrest the disease process in order to prevent complications or disabilities. At the level of the community its importance lies in the fact that this arrests the spread of the disease in a community if the disease is a communicable one. Therefore, for the control of tuberculosis, finding a case in the early stages of the disease and its subsequent cure are very important.

Disability Limitation : Disability limitation is a level of prevention concerned with the consequences of advanced disease. This involves treatment of a more or less advanced stage of the disease. At this late level of prevention certain economic and environmental measures may help in preventing sequelae but the preventive measures are primarily of treatment to prevent further complications.

(iii) Tertiary Prevention

Tertiary prevention is applicable to post-pathogenic phase. In this phase, the level of prevention is the rehabilitation of the victim. This is the last level of prevention. It is the prevention of complete disability after anatomic and physiological changes have more or less stabilised. It's primary objective is to return the affected individual to a useful place in society. In other words, it essentially means rehabilitation. Rehabilitation has physical, psychological and social components. It involves, among other things, job placement for the satisfaction of the afflicted person's employment potential.

Check Your Progress 4

Notes : a) Space is given below for your answers.

b) Check your answers with the ones given at the end of this unit.

1. Fill in the blanks.

a) Number of new cases in a year is known as ..... .

b) Total number of cases over a period of time is known as ..... .

c) The period between point of contact of a disease and Progression is known as .... .

d) The three phases of pathogenic stage are (i) ....., (ii) ..... and (iii) ..... .

e) Recovery, death, chronic and disability are the factors of ..... .

f) The functions of secondary prevention are ..... .

g) Primary prevention corresponds to ..... phase of natural history of disease.

1.5 DETERMINANTS OF HEALTH

The factors determining health are many. However, we will be able to understand this issue better if we view health both as a problem and as a need.

Viewing health as a problem would mean to understand the (i) suffering, both mental and physical, inflicted on the human beings on account of diseases and disabilities, (ii) inability to prevent the diseases, (iii) inability to cure certain diseases, (iv) differential disease patterns existing among countries, age groups, sex, caste and class and, (v) lack of funds for basic health care services. Such factors help us to understand health as a problem.

Health as a need would mean analysing (i) provision of health care services, to meet the health needs of the people, as a matter of people's right, and (ii) ensuring acceptability to whatever is made available.

Seen in the context of health both as a problem and a need, we could identify many factors which determine health. As the I.C.M.R. and I.C.S.S.R. Committee notes : "Health is a function, not only of medical care, but of the overall integrated development of society – cultural, economic, educational, social and political". However, we shall discuss the following determinants viz. differential disease pattern, economy, environment, education, and health seeking behaviour.

1.5.1 Differential Disease Pattern

As we have seen earlier, the idea of disease as a single determinant of health gained momentum with the onset of the era of bacteriology in the late 19th century. In the excitement over the discovery of the bacteriological agents of disease, however, causes relating to the host and environment were often forgotten. Though we have seen in Section 1.3 that disease causation is a complex process involving a host of changing relationships involving the host, agent and the environment, yet we cannot ignore the importance of disease as one of the important determinants of health.

In order to understand how differential disease pattern determines health, we may consider the following issues :

- **Fatal Diseases vs. Common Diseases** : As you are aware, there are certain diseases which are fatal i.e. the person affected by such a disease is sure to die as there is no treatment. For example, AIDS. Similarly there are diseases such as ordinary fever, skin infections, eye infection etc. which are easily curable. Obviously, as you would agree, the persons suffering from common diseases enjoy better health status than those affected by fatal diseases.

  This kind of relative health status can also be seen in the case of those who are suffering from chronic diseases and common diseases. For example, a person suffering from diabetics, a chronic illness, may not enjoy better health status as much as the one affected by conjuctivities (eye infection).

- **Endemic vs. Epidemic / Pandemic Diseases**: Endemic diseases are the ones which are localised i.e., they occur only in a particular area. For example, Filariasis is commonly found in the coastal areas. Epidemic diseases are those which has a spread out effect. Outbreaks such as plague spread out fast if they are not effectively controlled. An endemic disease becomes pandemic when it spreads from one country to another. Such diseases, both endemic and epidemic/pandemic, have different impact on the health status of those affected by them as compared to other diseases. For instance, epidemic such as plague traumatises the entire community and the nation. The persons affected by epidemic diseases are rated very low in terms of health status.

- **Diseases across Age and Sex** : Variations in disease pattern also occur in terms of age and sex. For instance, infants and children are more prone to illness and mortality than the adults. This is also true in the case of females who are easily susceptible to morbidity and mortality than males. Thus we find that differential disease in relation to age and sex tends to act as a strong determinant of health.

1.5.2 Health and Economy (Agriculture)

Needless to say that economy is one of the important determinants of health. While discussing this issue we shall focus our attention mostly to the agrarian economy as more than two-thirds of the people in developing countries depend entirely on agriculture for their livelihood. Most of the poor spend more time in agriculture. Most of their income is spent on food which basically comes from agricultural sector. Some of the factors of agriculture which have direct influence on the health of the people are :

- Adequate farm income.
- Income from agricultural labour.
- Enough food (energy) for agricultural work.
- Nutritional value of the food eaten.
- Health hazards of agricultural technology.

There are also other issues of agriculture which affect the health status of the people both positively and negatively. While some factors affect directly the others influence indirectly people's health. Among the many factors affecting health, the crucial ones are :

- Policies on agriculture which favour production of cash crops over food crops. The regional imbalances in terms of investment in agriculture. For example, the policy may favour more investments in the productive regions such as Punjab, Haryana etc. and neglect the non-productive regions such as Bihar, Rajasthan etc.
- Erosion of land fertility caused by over-and shifting-cultivation.
- Production of crops with harmful effects and more hazardous to health. For example, heavy application of toxic pesticides and production of tobacco and narcotics.
- Health of farm labourers who are the victims of gender based and unequal wage system.
- Equity in accessibility to food. Often the majority poor, who form the labour force in the agricultural sector, do not have easy access to food.

1.5.3 Health and Environment

The debate on health and environment centres around both the direct and indirect impact of environment on health. The indirect effect can be assessed from the nexus between (i) poverty and environment; (ii) population and environment. The nexus between the major components of environment i.e. land, air and water, and health reveals the direct impact on health.

- Poverty and Environment

There are two views on the nexus between poverty and environment. According to the first view, the excruciating poverty of the rural people force them to encroach the forest reserves for their livelihood. As a result there is deforestation which further leads to fall in total rain fall and soil erosion which adversely affect farm production. Faster rate of decrease in farm production further accelerates poverty and thus leading to deleterious health status. Therefore, preservation of forest resources is advocated strongly for better health, particularly in the rural areas. You may see this situation in your local area.

On the contrary, according to the second view, the declining environmental resources such as forests, is mainly the result of uncontrolled rate of growth and disparity in the consumption of resources between the rich and the poor. It has been estimated that every thousand baby born in the developed industrialized world consume three to four times as most of the earth's resources as 9000 born in the developing world ("Brundtland Commission Urges New Global Partnership". Perspective No.8, Spring, P.16). Though variations in consumption pattern is tangible between developed and developing countries, such variations are more sharp and pronounced in our own countries and communities. Accelerating rate of growth and the increasing tendency for profit induced by market led economies have forced the developed countries to demand for raw materials with an increasing reliance on imports from the developing countries. This is also true of urban and rural situation within a country and among developing countries.

Yet another cause perpetuating deforestation is the major power (hydel) projects financed by Multinational Corporations (MNCs), World Bank and the International Monetary Fund (IMF). It is estimated that the Grande Carajas Project in Brazil will cost $62 billion and entail deforestation of an area equal to France and Great Britain together. (Mukherjee, 1993). Similar concerns are expressed by environment activities with regard to Narmada Project in India. Such projects will have deleterious effect on the environment and the health of the people.

- Population and Environment

Often faster rate of population growth in the developing countries is cited as the major cause of depletion of natural resources. However, this view cannot be held entirely true. Besides the reasons mentioned in the preceding section on the nexus between poverty and environment, the other factor used to counter this view is the extremely skewed distribution of resources. In the developing countries, the landless agricultural labourers form the majority population. Devoid of access to productive resources such as land, they tend to depend on the forest resources for their existence. Therefore, it is incorrect to blame the poor for the depletion of forest resources.

- Water, Air, Land and Health

It has been argued that the health of the poor is affected by polluted water, inadequate sanitation, air pollution and land degradation. It is estimated that in poor countries :

- Diarrhoeal diseases resulting from contaminated water kill over 3 million children per annum, and cause about 900 million cases of illness each year
- Indoor air pollution from burning wood, charcoal, or animal dung endangers the health of 400-700 million people world wide
- Dust and soot in city air causes between 300,000 and 700,000 premature deaths per annum
- Soil erosion can cause annual economic losses ranging from 0.5 per cent to 1.5 per cent of GNP
- Twenty-five per cent of all irrigated land suffers from salination

- Tropical forests, the primary source of livelihood for about 140 million people are being lost at the rate of 0.9 per cent per annum (Mukherjee, 1993).

Mining of the earth, nuclear testing, mismanagement of Radio-Active wastes, dismantling of nuclear weapons, tragedies such as Bhopal caused by Union carbide (killing in one night 2000 people and permanently disabling 2,00,000 women, men and children) and the wars are some of the environmental hazards which directly lead to dangerous health problems. The following statement may further help us to understand the nexus between environment and health.

"If any man is rich and does give help to one who stands in need, he gives the poor man what was already his. The earth was made for all, not just for the rich". Pope Paul, IV.

Activity 2

1. Visit your Primary Health Centre and identify the incidence of waterborne diseases in your district in the year 1997.

2. Visit an industry/factory in your district and find out how they cause health hazards.

1.5.4 Education and Health

The interlinkages between education and health are well established. It has been proved that growth in literacy rate, particularly among women, has induced positive impact on health. For example, in Kerala the fall in mortality, morbidity and birth rates is mostly attributed to the level of education and literacy than to mere economic growth. The positive impact of education on health is the result of improvement in personal and public hygiene, life style, environmental sanitation, appropriate nutrition and better understanding and positive attitude towards preventive, curative and promotive care.

However, it has been argued that the nexus between health and education is "to be understood in the wider context of local culture, with its structures of knowledge concerning health (WHO, 1986)" and not merely in terms of literacy. This concern necessitates a deeper understanding of the interlinkages between education, knowledge and health. It has been said that "to know (knowledge) is to transform reality". In this context it is important to ask, "what is knowledge and who has the access to information and knowledge ?"

In development terms knowledge is considered the best power that people can have. Therefore, enabling the poor to understand the factors inimical to their well-being is very important. They must be enabled to participate freely in the process of understanding their situation and they must be given the right to own and use the knowledge. Often, superstitious beliefs and traditional practices which form an integral part of culture are used to explain the deplorable health status of rural masses. It is also often argued that the poor do not enjoy good health because they are not receptible to change. These arguments do not find merit always. As has been demonstrated by many voluntary organisations such as Comprehensive Rural Health Project (CRHP) in Jamkhed, Maharashtra, the rural people are receptive to change and they are open to new knowledge and information that is not used to perpetuate their subordination to the medical profession and the local power structure. What is important for us to know is that there must be an interface between scientific knowledge (this is not to say that traditional knowledge is not scientific) and some of the cultural practices and values of the rural people. This assumes more importance in the field of primary health care which condemns the superiority and domination of medicine over the health culture of rural community. Certainly education and literacy can play a major role to make health care simple and effective. Raising the literacy and educational level of children and adults, mainly the women has proved to be more effective at arresting morbidity and mortality rates than building hospitals for specialised curative care mostly for the rich.

The impact of education on health should not be understood solely within the ambit of 'Health Education' which is normally used to communicate health messages. Health education is different from education and education promotes not only the literacy but also understanding of socio-cultural, economic and political factors that shape the development of people. Since health forms an integral part of development, the positive impact of education on health can be perceived only when education becomes a force for enabling people to understand the cause of under-development and to evolve appropriate

actions to improve their well being. For this the people do not need university degrees and diplomas, but they require conscientisation. Conscientisation is an awareness building learning process through which people perceive, interpret, criticize and finally transform their own environment. This process can take place through adult education, literacy campaigns, health education, participatory action research (PAR), etc. Any form of education, be it health education, adult education or formal education, becomes a liberating force only when it enables the poor to critically analyse their own situation and to take appropriate action.

1.5.5 Health Seeking Behaviours and Health

Health perception and health practices of people also play a role in determining health. Often it is contended that peoples' perception and practices of health are determined by their beliefs, values, customs and prejudices. However, we must remember that cultural factors both positively and negatively impact health. For example in the nineteenth century in India, the debate on raising the age at marriage hinged on the damage to the health and well-being of a child bride. Child marriage or early marriage (before 19 years) is still practised in some part of our country. Such cultural practices have adverse effect on the health of adolescent girls. However, we must also remember that some cultural factors promote health. For example, given adequate incomes, Indians utilise a cereal-pulse combination in their diets. Such a practice compensates for animal protein and contributes to better health.

Health seeking behaviours also include superstitious beliefs and ritual worship of many goddess to ward off disease or to seek cure. Some scholars call such practices as "irrational" health practices and they even suggest that those involved in such practices should not be provided with health facilities. On the contrary, majority of scholars have also proved that when communities have access to effective and affordable health services, these are sought after by even the most "superstitious" and "ignorant" communities. Therefore, what is important for us to understand in this context is that people often resort to ritual worship and superstitious beliefs essentially because they have no availability or access to affordable and effective health care services.

Activity 3

1. Meet 5 elderly women in your community and elicit their perception/views on the causes of the following diseases:
   a) Jaundice
   b) Diarrhoea
   c) Chicken pox
2. Visit two families which had some health problems in the previous month and find out where they took the sick person for treatment and why ?
3. Identify any three cultural practices which, according to you, promote health. For this purpose you may talk to some elderly person (women) in your community.

1.6 INDICATORS OF HEALTH

In the previous section, we have discussed determinants of health. In this section, we are going to discuss some of the key indicators of health. Before we come to the indicators, let us go back to the section 1.2.1 wherein we have discussed the approaches to understanding of the concept of health. This is necessary as the indicators we are going to identify are closely related to some of the key issues we have raised in the approaches.

The area of indicators of health is riddled with controversy. This is because different authors, according to their own perceptions on health, have evolved different indicators to explain health. For example, according to Henry Sigerist, health is "not simply the absence of disease; it is something positive, a joyful attitude towards life, and a cheerful acceptance of the responsibility that life puts on the individual". Going by this definition, the indicators must reflect "joyful attitude", for instance. As you may agree, it is difficult to identify universally acceptable indicators for "joyful attitude". Thus while identifying

indicators of health, we are confronted with issues of ethics and morals. There are also a host of empirical problems. For example, it is often asserted that lowering the birth rate with family planning would result in higher per capita income. Yet Kerala state which lowered its birth rate does not find its per capita income increasing; on the contrary the per capita income appears to be declining.

According to N. I. Jazairi — who has reviewed the earlier attempts, particularly the ones undertaken by the World Health Organisation (WHO) — two approaches have dominated the past efforts. They are: (i) understanding health indicators in relation to social conditions such as literacy, perfected water supply, housing, health care facilities etc. and (ii) explaining health indicators in relation to the level of health such as mortality, morbidity and disability. However, while recognising these problems, scholars have nevertheless agreed on some indicators for the measurement of health status of a population. Some of the commonly used indicators are presented in the ensuing part of this section.

1.6.1 Crude Death Rate

One frequently used index is the Crude Death Rate. The Crude Death Rate refers to the number of deaths per year per thousand population. In India, the Crude Death Rate as per the 1991 census is 10 (UNICEF, The State of the World's Children 1993, O.U.P. New Delhi, 1993). The figures for the rural death rate is higher than for the urban and stood at 10.4 and 6.7 respectively (Government of India, Ministry of Health and Family Welfare, Family Welfare Programme in India Year Book 1990-91, Table - B.4, New Delhi 1992). The rural death rate is thus substantially higher than the urban. Kerala is the one remarkable state where such rural-urban disparities do not exist. It is also the state with the lowest death rate in the country; the death rates in the rural-urban areas were 5.9 and 5.8 respectively (ibid). Madhya Pradesh (death rate 12.5 combined; 13.6 rural and 7.5 urban) and Uttar Pradesh (death rate 12 combined; 12.8 rural and 8.8 urban) have the highest death rates in the country.

1.6.2 Infant Mortality Rate

The Infant Mortality Rate (I.M.R.) is considered a sensitive index of the health of the population. It is defined as the number of deaths of infants within one year of birth per thousand live births. India belongs to the group of countries in the world with a high infant mortality rate; it stood at 84 in 1991 (UNICEF, op.cit.). There are however wide variations in the infant mortality rate in the country. The infant mortality rate is lowest in Kerala at 17 (Rural 18 and urban 16); this is on par with the infant mortality rate in the developed countries. It is interesting to note that Kerala is unique among the states of India in that there are no marked rural-urban differences in the infant mortality rate. The highest IMR is in Orissa at 123 (Rural 127 and Urban 68). The difference in infant mortality rate between the various states and the rural-urban difference indicate the variation in the health and development status among these regions. The infant mortality rate also shows variations within the same region among different socio-economic groups. The infant mortality rate is lower among the higher socio-economic strata in a community and higher among the lower socio-economic groups. One study, for example found that the infant mortality rate was lower in households with electricity as the source of light than in those households without electricity (UNICEF, Differentials in Infant Mortality).

1.6.3 Birth Rate

The Birth Rate is defined as the number of births per year per one thousand mid-year population. The determinants of the birth rate are complex and involve many factors—social and economic. Some of these are the ownership and utilisation of physical assets of couple, income, technology access, infant and child survival, employment, education, security in old age, access to health care etc.

The birth rate in India is rather high and stood at 29.9 (Family Welfare Programme in India, op.cit). The birth rate in the rural area is higher than in the urban areas and stood at 31.5 and 24.4 respectively. Again there are marked variations among the states. Kerala is distinguished with the lowest birth rate in the country at 19; the rural and urban birth rates were 19 and 19.3 respectively. Kerala is also unique in not having marked rural-urban differences in the birth rate. Madhya Pradesh at 35.7, Rajasthan at 33.1 and Bihar at 32.9. These states are collectively sometimes referred to by the acronym of BIMARU (Bihar,

Madhyapradesh, Rajasthan and U.P.). They are also marked by striking rural-urban differences. In Madhya Pradesh for example, the rural birth rate stood at 38.7 and the urban at 29.1 while in Uttar Pradesh they were 37.2 and 29.3 respectively. In general the better the socio-economic situation, the lower is the birth rate.

1.6.4 Sex Ratio

The Sex Ratio is the number of women per thousand men in the population. This is considered a sensitive index of the health and social status of women. The sex ratio in India is low and has been on the decline throughout this century. In 1991 it stood at 929. In other words, there are only 929 females per thousand males in the population. Kerala is the only state in India with a favourable sex ratio. In 1991 the sex ratio was 1040 (Family Welfare Programme in India op.cit.). Uttar Pradesh had a markedly low sex ratio at 881 (Ibid) followed by Rajasthan at 913 and Bihar at 912.

1.6.5 Access to Health Care Services

In measuring access to health care services the indicators frequently used are population per sub-centre and population per primary health centre (PHC). This refers to the population under the geographical area of a health facility such as the sub-centre and the P.H.C. These, however, are more correctly the indices of availability of health care services rather than of access. Other such indicators used are the bed-population ratio and doctor-population ratio. The former refers to the number of hospital beds per thousand population and the later to the number of doctors per thousand population. All this health information enables the planning process for health services in the country. Apart from this primary objective, these data also provide us with trends in health status, health care utilisation and impact of health services.

1.6.6 Other Indicators

Disability rates, utilisation rates, physical quality of life index (PQLI) and disability-adjusted life years (DALYS) are some of the other indicators used to measure health.

Check Your Progress 5

Notes : a) Space is given below for your answers.

b) Check your answers with the ones given at the end of this unit.

1. Define :

a) Crude Death Rate

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b) Infant Mortality Rate

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c) Birth Rate

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d) Sex Ratio

1.7 LET US SUM UP

In this unit, we have discussed some of the key issues in understanding health. This we have done by analysing some of the approaches used to explain health. Among the three approaches, we find the social-medicine approach more relevant to understand health. Our discussion on the approach is followed by explaining the concept of health, particularly in the light of the definition given by W.H.O. While explaining the concept of health we have come to understand that this concept should not be understood merely in terms of diseases and the health care services. Therefore, we explained the concept of epidemiology the study of which provides us a better understanding of the meaning of health.

Our discussion on epidemiology, particularly the epidemiological triad enabled us to have a broader view on the concept of health. In this context, we have discussed at length two important factors viz (i) natural history of diseases and (ii) determinants of health. Our analysis on determinants of health has further strengthened the view that health is closely related to factors such as economy, environment education and health seeking behaviours.

1.8 KEY WORDS

Capitalism : A set of arrangements in which one class—the capitalists or bourgeosie owns the capital and other means of production, while a second class—the workers or proletarians possesses only its labour power i.e. capacity to work. As an economic system it provides greater freedom to individuals to transact business on their own account in order to maximise their profits.

Ayurveda : An ancient system of Indian medicine. The term Ayurveda is used to signify the entire corpus of the medical wisdon. The first component "ayur" is the word that signifies "life" (jivitam) and the other component "veda" refers to a branch of learning (vidya-sthama). Ayurveda would thus mean, "the science or art of living".

Siddha : An ancient system of medicine, mostly practiced in Tamil Nadu. The factors which characterise this system of medicine is the employment of mercury and arsenic as medicinal agents, extractions from minerals, preparation of essences, calcination, and the use of animal products with healing properties. It is said to have been developed by the nine million Siddhas (nava-Kiti siddhas)

Public Health : The field of medicine that is concerned with safeguarding and improving the physical, mental and social well-being of the community as a whole.

Incubation : The development of an infectious disease from time of entrance of the pathogen to the appearance of clinical symptoms.

Convalescent : Pertaining to convalescence which means the stage of recovery from illness, operation, or injury.

1.9 SUGGESTED READINGS

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1.10 MODEL ANSWERS

Check Your Progress 1

1. Two factors to which clinical–medicine approach gives importance are (i) disease as a single determinant of health and (ii) scientific medicine as the sole means for the cure of diseases.

2. The positive view is the optimism expressed on the health care practices evolved by the people to prevent and cure diseases. The negative view is people's resistance to understand the scientific causation and treatment of diseases as they tend to believe in superstition due to ignorance and illiteracy.

3. The economic structure organised on the principles of capitalism tends to treat health sector as a potential industry for profit making. It views the health needs of the labourers as a necessary condition for production of goods, and it creates debilitating dependency of the poor on the medical technology.

Check Your Progress 2

1. Following are the five major issues:
   - Health is not just the absence of disease
   - Health is not just the provision of health care services
   - Concept of health varies from community to community.
   - Priority must be given to health problems which affect the poor.
   - Modern medical technology should not assume superiority over the traditional health care systems which are culture sensitive.

2. Following are the factors we need to remember when we talk of health:
   - Every person must be in such a position that her/his basic needs such as food, shelter and clothing are met.
   - Every person has a right to demand equal opportunities for employment and just wages
   - The environment in which one lives must be such that it does not become a potential source for the cause and spread of disease.
   - People must have the freedom to organise themselves for collective action aimed at improving their health status.

- Every person as far as possible, must be free from common preventable diseases.

Check Your Progress 3

a) Epidemiology studies the distribution and determinants of disease frequency.

b) The study of distribution of disease comes under descriptive epidemiology.

c) The study of disease causation comes under analytic epidemiology.

d) Epidemiological triad consists of Agent, Host and Environment.

Check Your Progress 4

a) Number of new cases in a year is known as incidence.

b) Total number of cases over a period of time is known as prevalence.

c) The peiod between point of contact of a disease and progression is known as incubation period.

d) The three phases of pathogenic stage are (i) incubation (ii) clinical and (iii) convalescent.

e) Recovery, death, chronic and disability are the factors of convalescent phase.

f) The functions of secondary prevention are early diagnosis and prompt treatment and disability limitation.

g) Primary prevention corresponds to pre-pathogenic phase of natural history of disease.

Check Your Progress 5

a) Crude Death Rate refers to the number of deaths per year per thousand population.

b) Infant Mortality Rate is defined by the number of deaths of infants within one year of births per thousand live births.

c) The Birth rate is defined as the number of births per year per one thousand mid-year population.

d) The sex-ratio is the number of women per thousand men in the population.

UNIT 2 HEALTH AND DEVELOPMENT

Contents

2.0 AIMS AND OBJECTIVES

As you have learnt from the previous unit, health is intrinsically related to development. While development efforts lead to improvements in the health status of the people, it is also a necessary condition for people to be healthy in order to be active partners in the process of development. Achieving a desirable level of health is possible only when the poor are enabled to have control over what is produced and distributed in the process of development.

After reading this unit, you will be able to :

- describe the various approaches to development
- devolve a clear perspective on development
- discuss the inter-relationships between health and development
- explain why economic growth alone is insufficient to explain the differences between countries with regard to health
- discuss the complexity of health — development interlinkages in the Indian context.

2.1 INTRODUCTION

The inter-relationship between health and development is now well-recognised. The basic goal of all development process is the improvement in the quality of life of the people. Health is one of the indicators that best describes the quality of life. Health not only is the end-product of developmental efforts, healthy population also plays a key role in achieving the developmental goals.

The relationships between health and development, however, need to be placed in a network of interactions between multitude of basic services such as housing, nutrition, education, water supply etc. apart from health services itself. Secondly, positive health should not be seen as a product of economic development alone, since many of the macro indicators of development do not reveal the quality of life of the vast sections of the population.

In this Unit, after briefly discussing the key issues in development, we shall focus on the inter-relationships between health and development keeping the above issues in the background. In particular, we shall examine the inter-country and intra-country experiences in this regard.

2.2 UNDERSTANDING DEVELOPMENT : SOME ISSUES

In the previous unit, we have discussed the concept of health. In the same unit, we have also seen that the factors determining health are closely related to development. Therefore,

it is important for us to understand the concept of development in order to learn how health is closely related to development.

The term "development" has occupied a key position in the history of social, economic and political analysis as this term forms the basis for characterising the status of humanity. Like health, this term has also been in debate for many centuries yet eluding universally acceptable definition.

We may attempt to understand this term in many ways. One way is to explain this concept from the point of view of the eminent thinkers on development. But space will not permit us to do this. Therefore, what we can attempt is to highlight the key issues in development. Here again, it is difficult to explain all the issues. In the light of these constraints, what perhaps we can attempt is to explain some of the key issues in development in this section. The key issues can be understood if we ask the following questions as the issues we are going to discuss are centred around these questions. (Thomas Alan and David Potter, 1992)

1. Who defines development ?
2. Development of what ?
3. What if the development of one group is gained at the expense of the other group ?

2.2.1 Who defines development ?

You must be wondering what kind of a question is this. However, you will agree that this is an important question. In order to understand this question, let us first think of a small village in India, may be your own village. Find out whether the poor in your village have the choice to define their own development. You will find that though the poor want to define their development yet they do not have the choice. In most of our Indian villages it is the powerful (landlord, money lenders, temple priests etc) play a crucial role in defining development at the village level. However, this trend appears to be changing with the growing strength of the village panchayat system and the emergence of women's groups.

Similarly, you will find the District collector and his staff playing a key role in defining development at the District level. You will also find that, most often, the concept or the approach to development are determined by policy guidelines prescribed by the State Government or the Central Government. In other words, it is the bureaucrates and the politicians with the help of some selected academicians as advisors define what is development for the masses.

However, there are also other international agencies such as the International Monetary Fund (IMF) and the World Bank which grately influence the development path that the countries, particularly the developing countries should follow.

Thus we find that those who are privileged to define development are not always the victims of underdevelopment.

2.2.2 Development of what ?

This question also assumes importance when we want to understand the concept of development. Development has many facets. When we think of development, we think of development of economy, health, education, agriculture, industry, infrastructure, defense, communication etc. But what is important for us to know is the preferences certain sectors of development enjoy. Perhaps, we can understand this question better, if we examine briefly the approaches to development. Approaches to development seen in a historical perspective suggest two distinct trends. They are: i) economic growth or production oriented approach and ii) human needs or distribution based approach. Let us discuss each of these trends briefly.

(i) **Economic growth or production :** When we have a close look at some of the writings of leading development thinkers, we find that most of them have equated economic growth with development. Though they are unanimous on this perception, they are at varience in proposing means and ways to achieve economic growth. A brief presentation of the contributions made by some of them would enable us to understand this view. The scholars who are said to have pioneered this thinking are Adam Smith and David Ricardo. Adam Smith was mainly concerned with the causes of increasing productivity in relation

to division of labour and the size of the market. Ricardo, on the other hand, provided an analysis of the distribution of production among the various classes in the society, and of how this affects economic development.

Similarly, the works of Malthus, Karl Max, Rostow and Keynes are also referred to explain the concept of development from the point of view of economical growth. However, the paths suggested by them to achieve economic growth vary. For example, Malthus contributed to the development thinking while linking population growth and economic growth. In his view uncontrolled population growth will retard economic growth. The works of Karl Marx are said to be a watershed in the field of development thought since he proposed totally a distinct approach to development as opposed to the ones proposed by earlier thinkers. For Marx, the analysis of development must begin from the process of production which contained two crucial factors: (i) the material conditions such as raw materials, tools, machines and capital etc. (i.e. means of production) (ii) the relations between human beings viz the labourers (producers) and the owners of means of production. Marx, emphasised the importance of value of labour as one of the main components determining the mode of production. Further, the economic growth or development has a meaning only in relation to the classes (working class/capitalists) involved in the process of production.

Economic growth as a prime mover of development was carried further by scholars such as Keynes and Rostow. Keynes, in the wake of Great Depression (production, by the Industrial Revolution far exceeded the demand resulting in periodic slumps and crises in the 1930s) argued that the depression was the result of deficiency of an aggregate demand. Therefore, the need was to accelerate effective demand. For this, he proposed that large scale state spending would increase employment and incomes and thereby restore effective demand.

Rostow argued that the problem of underdevelopment was the shortage of capital. He identified five stages in economic growth. They are (i) the traditonal society, (ii) the pre-take off stage, (iii) take off, (iv) the road to maturity and (v) the society of mass consumption. He argued that the underdeveloped countries, still being the traditional societies, had only to emulate models followed by the advanced countries which had all passed these stages and attained self sustaining growth. According to him what was necessary for 'take off' was the mobilisation of domestic and foreign savings in order to generate sufficient investment to accelerate economic growth. There are many other economists including Arthur Lewis, Hollis Chenery, who have contributed to the development theory by largely considering development and economic growth as synonymous.

This perception still remains a dominant one particularly in the resurgence of market economy. Accumulation of capital and production of goods with high market potential are put in the centre stage of development thinking. In this process industrialisation, modernisation and free market are considered the vehicles for development. Technology, agriculture, industry and ecology are considered the engine of this vehicle. By technology it is meant change from traditional to modern scientific technology. Modernisation of agriculture means evolution from subsistance farming towards commercial production of agricultural goods. Transition from the use of human and animal power towards power-driven machines for achieving high monetary return means industrialisation. The movement from farm and village towards urban centres means the ecological arrangements taking place in the process of modernisation.

(ii) **Human-needs approach** : In order to understand the salient features of this approach we must also know the context in which this approach emerged. The context was the alarming rate of poverty which the developing countries experienced in the early 1970s. Many studies of poverty undertaken in this period revealed that the development policies pursued on the lines of economic growth led to concentration of wealth in the hands of the rich. This led to unequal distribution of wealth and property within countries and between socio-economic groups. This was corroborated by the emergence of dependency theories which attributed the causes of under-development to the exploitative dependency relationships established between developed and developing countries. Paul Bran, one of the main exponents of dependency theory, argued that any assistance rendered to the 'periphery' (developing nations) by the centre (developed nations) is primarily meant to create conditions for dependency. This leads to extraction of surplus production from the 'periphery' to the 'centre'. Therefore the issues such as i) equal distribution of income, ii) poverty alleviation, iii) employment generation, iv) exploitative dependency

relationships, and v) meeting the basic needs of the poor began to dominate development debate. However, most of the participants of this debate did not exclude growth as they premised their arguments on the principle of 'growth with justice' or 'redistribution with growth'. Such principles found recognition even in the international bodies such as International Labour Organisation (ILO) and the World Bank which proclaimed the need for reducing poverty and inequality. They appealed for productive employment opportunities rather than aggregate income growth as an objective of developmental policy. Satisfaction of basic needs which included minimum requirements of a family for private consumption. Food, shelter, clothing and essential services such as safe drinking water, sanitation, public transport, health, education and cultural facilities is considered as essential for achieving growth with justice. In India, this approach found expression in the Fifth Five Year Plan (1974-1979) when the Minimum Needs Programme (MNP) was introduced. The main objective of the MNP was to increase the purchasing power of the poor by providing the vulnerable groups with the basic needs basket through supply management and a delivery system. The MNP thus included : (1) rural house site-cum-house construction, (2) elementary education, (3) adult education, (4) rural health, (5) rural water supply, (6) rural roads, (7) rural electrification, (8) environmental improvement of urban slums, (9) nutritional programme.

Holis Chenary and Gunnar Myrdal are some of the authors who have contributed to this thinking in a great deal. Against this backdrop let us understand this approach.

Though many thinkers have argued for meeting the basic needs as a pre-condition for human development, it is Dudley Seers who perceived human needs as a distinct approach to development. According to him development must be understood in relation to the following conditions (Thomas Alan and David Potter, 1992):

- The capacity to obtain physical necessities (particularly food)
- Employment (not necessarily paid employment, but including studying, working on a family or keeping house)
- Equality, which should be considered an objective in its own right.

Understanding development from the point of view of human needs initiated by Seers led to the identification of many more conditions necessary for development by various other thinkers. Among those the ones considered very crucial are the following:

- Good literacy and educational levels
- Empowerment, participation and freedom.
- Safeguarding the environment to meet future needs (sustainable development).
- Participation in government.
- 'True' national independence, both economically and politically.
- Equal status for women and participation by women.

However, we must remember that human needs approach is never perceived independent of economic growth approach. This is because, in the recent past, economic growth approach has become more vibrant with the emphasis on free market and privatisation of economy aimed at capital accumulation through exports. Alongwith this, however, there is also a cut on government resource allocations for basic needs and services like health and education which were earlier considered the institutional life support systems. Now they are to be considered only as a safety net in the name of development with a human face.

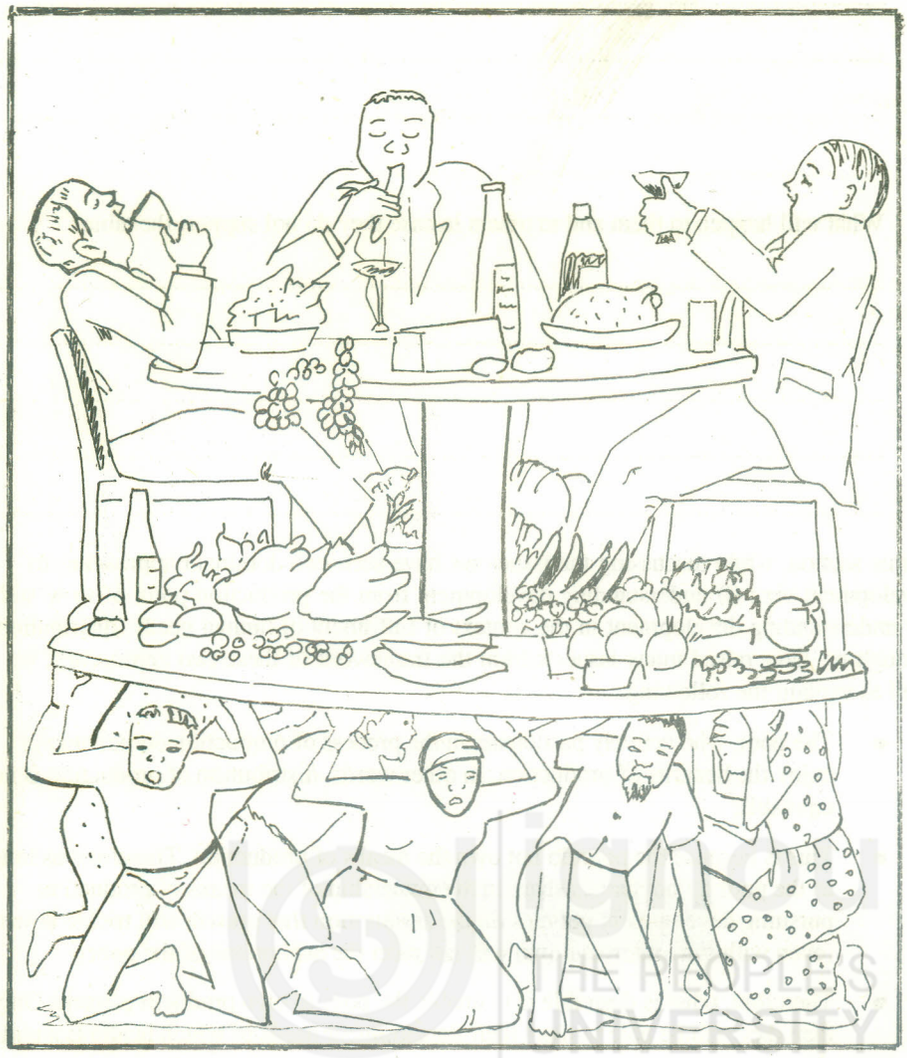
2.2.3 Development of one group at the expense of other group

Often development of one group has led to the underdevelopment of other group in a community or a society. This is also true of nations. In rural villages dams are built across river to harness electricity. In the process, thousands of people living on the banks of the river or in the nearby forest are displaced. While the electricity generated may be effectively used for production of goods, the poor are disturbed and made to suffer in the process of displacement. The goods produced in the factories may be necessary for the development of the rich living in urban and rural areas.

Similarly, roads are laid, sky high buildings are raised in the cities and towns. But the labourers engaged in the construction sector work under inhuman conditions. The women

labourers and their children scorch in the burning sunlight. Roads, and buildings are necessary for development, but whom do they develop? Perhaps the following figure will explain this issue better:

Fig 2.1 : Who sustains development?



Source: Anne Hope and Sally Timmel (1991) Training for transformation, Vol.3, Mambo Press, Harare

What do we find in the above picture ? We see lot of fruits, and other food items on the table. There is a section of the community eating merrily. Food is an important indicator of development. But do those who till the soil enjoy the benefit of their hard labour ? In this case, it does not seem so. This picture clearly indicates that those who seem to be developed have developed themselves only at the expense of others who are suffering. The labourers not only suffer but also sustain the development of others.

Activity 1

Answer the following questions in your own words in the space given below for each question:

1. Why are some people forced to sustain the table always ?

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2. Do they have a choice to leave the table if they want to develop themselves ?

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3. What will happen to them and to others in case they do not support the table?

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In this section, while discussing the issues we have seen two dominant approaches to development viz.: (i) understanding development from the production point of view and (ii) understanding development in the context of fulfilment of human needs (distribution). Though we have raised many issues within the framework of these two approaches, we need to explain the following :

- The poor, who actively participate in the process of production do not always enjoy the benefits of production. In other words, distribution of production is not equitable.
- This is because the poor do not own the means of production. Therefore, as long as the poor do not have a share in the ownership of the means of production, pursuing development policies on the assumption that growth will trickle down, (even with state interventions) will not meet the aspirations of the poor.
- Therefore, what is desirable is to enable the poor to own productive assets. Only then they will be able to meet their development needs of which health is a part.

Check Your Progress 1

Notes : (a) Space is given below for your answers.

(b) Check your answers with the ones given at the end of this unit.

1. Name the approaches to development as discussed in this section.

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2. Identify at least three conditions which led to the emergence of human needs approach to development.

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3. Explain why the benefits of growth do not always reach the poor ?

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2.3 HEALTH AND DEVELOPMENT : THE LINKAGES

In the previous section, we have discussed the main issues in development. We have also made an attempt to evolve a clear perspective within which the concept of development is to be understood. In this section, we are going to discuss the linkages between health and development. However, we request you to refer Section 1.5 on Determinants of Health discussed in the first Unit of this Block. You will find a lot of similarities between Section 1.5 of unit no 1 and this section. This is done to give you more information and to reinforce the point that health is closely related to development.

The linkages between health and development can be assessed in many ways. One way is to discuss this issue in the context of the approaches to development. It can be seen that approach to development based on economic growth perceives improvements in health as a necessary condition for development. Therefore, all over the world, the approach to developmental planning has been to create healthy individuals capable of participating effectively in the process of development. Productive manpower is considered essential for socio-economic development. Further if people were to be productive they must enjoy a satisfactory level of health. In other words, people are considered in terms of their economic value and the cost involved in raising their value.

The development based on human needs or distribution meant that equitable distribution of growth is essential for improving the health status of the poor. It is argued that investment in certain sectors of development such as provision of safe drinking water, education, sanitation, housing etc. is responsible for effecting improvements in health. This approach also seriously contests the view that modern curative medicine alone improves the health status of the people. Let us now look at the linkages between health and development in the historical context.

2.3.1 Reasons for Improvement in Health

There have been many studies which looked into the question of how improvements in health took place. There is one view which considers such improvements in health related to the structure and function of the body and the disease processes which affect it. This view is responsible for the establishment of and emphasis on curative care systems, hospitals and new medical technologies etc.

It has been challenged especially by medical historians based on experience of advanced countries. Based on historical data, they suggest that improvements in health have occurred more due to non-medical factors such as limitation of family size, increase in food supplies and a healthier physical environment.

In the 19th century, there were five diseases or groups of diseases which contributed to the reduction in death-rate : tuberculosis (45%), typhus, typhoid and continued fever (22%), scarlet fever (19%), cholera, dysentery and diarrhoea (8%), and small pox (6%). The possibility of reduction in mortality independent of human intervention appears to be around one fifth of the total improvement in the case of tuberculosis which was the major killer during this period. The remainder needs to be attributed to environmental changes. These environmental changes are (1) changes associated with a rising standard of living, (2) hygienic measures such as safe water, sewage disposal etc., due to the work of sanitary reformers. The decline of mortality in the typhus-typhoid and cholera is largely due to the second change. In the case of tuberculosis, standard of living has been considered responsible for the decline. The effect of therapy or any medical intervention is restricted to small pox. In the 20th century, there have been further advances in the standard of living and control of physical environment along with introduction of effective therapy and social services.

Historical data show that major improvements in mortality in Europe and North America occurred before the massive investments in health services. Economic development and social changes seem to have done more for health than the interventions of modern curative medicine. It has to be recognised that the spread of health services has been accompanied by major extensions in other social programmes — cash benefits to help the poor, programmes for the weaker sections for better housing, extension of education, and a whole range of social support programmes.

2.3.2 Inter-sectoral Approach

The issues in the preceding section alongwith several other factors formed the basis of evolving an inter-sectoral approach to health development. A perusal of this approach also enables us to understand the linkages between health and development. However, it will not be out of context if we examine the evolution of this approach. Among the many factors what really led to the formulation of this approach was the Declaration of Primary Health Care at Alma Ata in 1978. At this declaration, it was resolved that achievement of an acceptable level of health for all is not the concern of the health sector alone but also requires the action of other social and economic sectors. This is evident from the definition of primary health care (PHC). In 1979, the World Health Assembly while endorsing the Declaration of Alma Ata also recognised achieving health for all as a social goal which has to be integrated into a strategy of social development. As a part of the response to these perceptions, attempts were made to evolve an inter-sectoral action for health. In 1984, the World Health Organisation (WHO) published a report on "Inter-sectoral linkages and Health Development" based on case studies undertaken in India (Kerala), Jamaica, Norway, Sri Lanka and Thailand. From these studies, they concluded that it is possible to identify the social formation and socio-economic conditions in which various patterns of ill-health exist. Since then, in most of the countries, (particularly those which participated in the Alma-Ata Declaration) planning for health has become an issue of economic and social planning, and has not remained just medical planning alone. Following are some of the salient features of inter-sectoral approach:

1. The linkages between health and development are interactional. Healthy individuals do contribute to economic development. This condition does not necessarily contribute to an overall social development and therefore the well-being of the individual. This is especially so in a country characterised by illiteracy, unemployment, caste-class divisions, low womens' status etc.

2. Viewing in interactional terms, one needs to consider development in its widest sense. In this perspective, actions done in different social sectors (apart from health services and economic development) have a deeper influence on health.

3. Health from this angle is visualised in terms of social formations and socio-economic conditions which sustain various patterns of ill-health. Its emphasis is on health-related sectors that produce ill-health. Causative factors could be identified and intimated by recognising the linkages between the health and other major social and economic sectors. It also helps to uncover the socio-cultural and political processes that promote health and well-being, or that undermines the emergence of particular patterns of morbidity and mortality.

4. The linkage between health sectors and non-health sectors will have different emphasis in difficult situations. In the developing countries, the health problems associated with infection and poor living conditions need to be controlled. Experiences of different countries show that health status to a great deal depends on the distributive processes, the degree of equity, and the socio-political structures that enable the people to articulate their needs and participate in social decision-making.

5. The starting point of such an approach is at the national level. The national planning and policy-making process should provide the means of identifying and assessing the influence of national programmes and macro-economic policies on the health of the population. Inter-sectoral activity requires the capacity for joint planning, enabling various agencies to act together and make an impact on health. Even the earlier human resource development approach and basic needs approach lacked this joint planning and action.

6. At the community level, inter-sectoral action can be possible only by mobilising people. However, the efficacy of decentralised implementation is largely constrained by existing power structure. Therefore, mobilising people especially the under-privileged members at the village level is not an easy task. While inter-sectoral action is a desirable and empirically established principle, the existing bureaucratic and institutional constraints need to be overcome to make it more effective.

Check Your Progress 2

Notes : (a) Space is given below for your answers.

(b) Check your answers with the ones given at the end of this unit.

1. What factors were responsible for the decline of mortality caused by typhoid, cholera, T.B. and Small Pox in the 19th century ?

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2. Mention the salient features of interactional approach to health.

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2.3.3 Health Problems as an Off-shoot of Development

In addition to an understanding of the positive impact of development on health, it is also necessary to consider the negative fallouts due to the process of development itself. These also occur largely through indirect channels, especially the changes effected in the environment due to development. We may identify the linkages between health and development by considering the negative factors of development. The following are the crucial factors:

1. Industrialisation is one of the essential features of development. In the process of contributing to material well-being of the nation, development also creates negative consequences for health. These negative consequences mainly arise out of pollutants created during production or released to the environment. In the former case, it is the worker at the work place who faces the adverse effects. Diseases caused by chemicals have been observed after high exposure in the work place. Examples are different chronic lung diseases (silicosis, asbestosis), kidney diseases (cadmium and mercury), diseases of central nervous system (organic solvents, lead, mercury, manganese) and malignant disease of different organs (asbestosis, arsenic, nickel, aromatic amines, benzene etc.).

   In the latter case, the adverse impact normally occurs due to pollutants released to the external environment — water, soil and air. The Kalu river which runs through two of Bombay's industrial suburbs receives liquid effluents containing heavy metals from over 150 industrial units. This causes high level of mercury and lead in the water near the villages. The villages are increasingly exposed as the heavy metals enter the food chain. The Ganga Water pollution is largely due to the effluents from the industries located along the entire stretch of the river apart from the contaminated water generated due to uncontrolled urbanization. Industrial accidents such as Bhopal Gas Tragedy which caused thousands of deaths and over 50,000 injuries is another fallout of industrial development.

2. In the agricultural sector, another important component of development, the negative fallouts occur mainly from the use of pesticides. Wide spread use of pesticides in intensive agriculture has resulted in the contamination of acute resources. Residues of several pesticides have been detected in drinking water. Besides having the potential to cause chronic adverse effects on human health, the presence of pesticides in water sources also leads to resistance in sectors of water-related diseases. Exposure to chemical and pesticide poisoning are most common among farm workers.

3. Major irrigation schemes for supporting agricultural development also lead to serious health problems. Irrigation development has often been associated with an increased incidence of vector-borne and water-related diseases. The major vector-borne diseases include schistosomiasis, malaria, Japanese encephalitis etc. Apart from these increased levels of salinity, fluoride etc. have also been detected due to new irrigation schemes. These problems are found in many areas in India where major irrigation schemes have been implemented.

4. Sustainable development is the new approach developed to grapple with these problems mainly occurring as a result of over exploitation of resources, depletion and degradation of environment due to uncontrolled and lopsided development. Sustainable development means meeting the needs of the present without compromising the ability of future generations to meet their own needs. Two concerns are vital: development to meet people's basic needs; and ecological sustainability so that natural resources are not depleted or damaged. Meeting the needs of the present and future world population for food, water and energy without depleting resource base or creating adverse effect on health can be achieved only if the present pattern of development can be modified substantially. This is the message that we got from the earlier section on inter-sectoral approach also.

Check Your Progress 3

Notes : (a) Space is given below for your answers.

(b) Check your answers with the ones given at the end of this unit.

1. Identify the interlinkages between health and development as generated by the positive impact of development.

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2. Identify the interlinkages between health and development as generated by the negative impact of development.

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2.4 HEALTH AND DEVELOPMENT : THE INTERNATIONAL AND NATIONAL CONTEXT

In the preceding sections, we have examined the concept of development and some of the factors that best describe the interlinkages between health and development. In this

section, an attempt is made to explain the same by using certain key indicators of economic development and health both in the international and national context.

2.4.1 International Context

Comparisons between developed and developing countries need to be undertaken in order to understand the complexity of health-development inter-linkages. However, even within developing countries there are exceptions such as China or Sri Lanka. These countries, despite their underdevelopment, have also achieved higher levels of health.

Income alone is inadequate indicator of development. For comparisons, however, it has been often used because it is more easily measured than other aspects of development. There exist clear links between health and income both when considering individuals and averages for countries. A comparison of health indicators with economic indicators with respect to different selected countries show that the inhabitants enjoy the highest life expectancy tend to be those with the highest income per person. See Table 1.

Table 1 : Economic and Health Indicators in Selected Countries

Sl No.	Countries	GNP per capita US$ (1992)	Death Rate (Per 10,00,00) (1990-95)	Life Expectancy at Birth (1993)	IMR (1993)	Under-5 Mortality rate (1992)	Maternal Mortality (per 100,000 live birth) (1993)	Health Expenditure per capita US$ (1990)
1.	India	310	1145	61	86	124	250-499	21
2.	Thailand	1840	753	69	27	33	100-249	72
3.	Sri Lanka	540	659	72	24	19	25-99	18
4.	Pakistan						250-499	
5.	Nepal	170	1534	54	98	128	> 500	7
6.	Bangladesh	220	1554	53	107	127	> 500	7
7.	Ghana	450	1363	56	80	170	250-499	15
8.	Nigeria	320	1559	53	95	191	250-499	10
9.	Rwanda	250	1955	47	109	222	> 500	10
10.	Kenya	310	1176	59	65	74	250-499	16
11.	Canada	20710	466	78	7	8	< 25	1945
12.	Argentina	6050	679	71	29	24	25-99	137
13.	Chile	2730	656	72	17	18	25-99	100
14.	Mexico	3470	698	70	35	33	25-99	89
15.	Costa Rica	1960	479	76	14	16	25-99	132
16.	USA	23240	520	76	8	10	<25	2765
17.	Denmark	26000	538	76	7	8	< 25	1588
18.	France	22260	491	77	7	9	< 25	1869
19.	Germany	23030	530	76	7	8	< 25	1511
20.	Sweden	27010	452	78	6	7	< 25	2343
21.	UK	17790	516	76	8	9	< 25	1039
22.	China	470	699	71	27	43	100-249	11
23.	Australia	17260	478	77	8	9	< 25	1294
24.	Japan	28190	420	79	5	6	< 25	1538

Source: The World Health Report, 1995, WHO.

The limitation of equating the wealth of a society with its health status can be seen when we consider many exceptions among the countries. The following table of some selected developing countries brings out these discrepancies (see Table 2). It shows many countries

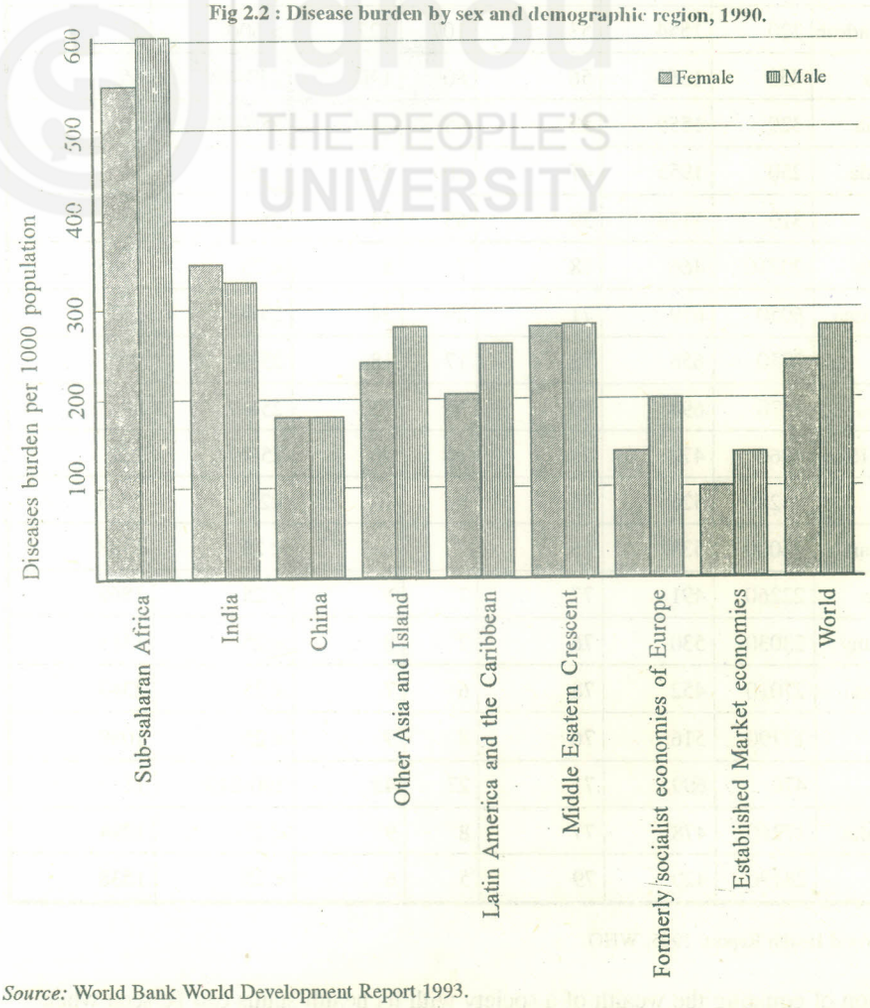
where high life expectancy at birth has been achieved without a high per capita income and also several countries with high per capita income and a relatively low life expectancy.

Table 2 : Some selected developing countries showing life expectancy at birth and GDP per capita income.

Country	Life expectancy at birth 1990	Rank	GDP per capita 1985-88	Rank
Hong Kong	77.3	1	14,010	3
Dominica	76.0	2	3,020	41
Israel	75.9	3	10,860	5
Cuba	75.4	4	2,500	52
Costa Rica	74.9	6	4,320	26
Behrain	71.0	18	9,490	8
Sri Lanka	70.9	20	2,120	60
Qatar	69.2	36	11,800	4
Oman	65.9	51	9,290	11
Saudi Arabia	64.5	59	9,350	9
Libya	61.8	69	7,250	12
Myanmar	61.3	72	660	115
India	59.1	77	870	101
Pakistan	57.7	78	1,790	71
Nepal	52.2	97	770	104

Source : WHO, Report of the WHO Commission on Health and Environment 1993. pp.17-19.

Fig 2.2 : Disease burden by sex and demographic region, 1990.



Source: World Bank World Development Report 1993.

Data on disease burden also show the influence of economic development on health with some exceptions as we have seen earlier. The experience of China again stands out.

Despite its large population and area as well as under-development it has achieved higher levels of health.

Although the income per capita in China is only 470 dollars as compared to 310 dollars in India, the child mortality is only 43 while the life expectancy at birth is 71 as against 124 and 61 respectively in India. This shows that redistribution of resources, satisfaction of basic needs and health services based on simple technologies play a much greater role in health.

Sri Lanka is another positive model where overall development has led to better health status of the population. Self-sufficiency in rice and several other items of food has been a development objective of the highest priority in that country. The main beneficiaries of the development programme has been the rice-growing peasantry. This programme helped to reduce regional disparities and inequalities among the classes. The efforts to increase productivity and transform the peasant economy was part of larger national programme in which satisfaction of basic needs received highest priority. A most important element was the programme for universal free education, an effective food rationing system, and an emphasis on rural housing. The public transport system and a network of roads improved the accessibility of even remotest-villages.

The rate of economic growth in Sri Lanka has been between 4 - 4.5% per year over the three decades 1950-1980. Although the rate of economic growth has been higher than for most other low-income countries, it has not been adequate enough to provide sufficient employment for the growing work force. Unemployment reached 24% in 1975, one of the highest rates among the developing countries. The Sri Lanka model shows that equity-oriented strategy as well as the pattern and pace of economic growth have implications for the quality of life and health of the people.

Activity 2

From Table 1, 2 and Figure 2, identify the countries and areas where economic growth do not match with levels of health.

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Check Your Progress 4

Notes : (a) Space is given below for your answer.

(b) Check your answer with the one given at the end of this unit.

1. Give four reasons for higher levels of health in Sri Lanka (Read the text again).

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2.4.2 The National Context : Inter – state Comparisons

The health status of the population in India as a whole presents a dismal picture. In Table 1, we have already seen the low per capita income, high child mortality and low life expectancy at birth. Apart from this, we have also seen that the disease burden in India is substantial and in this, females are more than the male population (See Fig. 2). These are typical features of under-development. Within this macro situation, there are a few exceptions similar to what we have seen in the international context. This is evident from Table 3 which presents inter-state differentials in terms of certain key health indicators and per capita income.

Table 3 : Inter-State Differentials in Health Indicators

S. No.	State	Per capita Income (Rs.)	IMR	Under-5 Mortality (1992-93)	Maternal Mortality (Maternal deaths per 100,000 birth) (1992-93)	Per capita medical and public health expenditure (Rs.) (1992-93)
1.	Kerala		13	32	87	48.51
2.	Punjab		55	68	369	57.22
3.	Himachal Pradesh		55	69	456	N.A.
4.	Maharashtra		50	70	336	31.57
5.	Tamil Nadu		56	87	376	49.77
6.	Karnataka		67	87	450	42.62
7.	Andhra Pradesh		64	91	436	32.41
8.	Haryana		65	99	436	50.12
9.	West Bengal		58	99	389	29.57
10.	Rajasthan		82	103	550	59.57
11.	Gujarat		58	104	389	43.64
12.	Bihar		70	128	470	24.84
13.	Madhya Pradesh		106	130	711	42.61
14.	Orissa		110	131	738	39.36
15.	Uttar Pradesh		93	141	624	25.53
16.	Assam		81	142	544	38.78
17.	All India		74	109	453	

Source: 1. *The progress of Indian States, 1995, UNICEF*
2. *P.K. Seeta and A. Radha : Recent Trend in Health Financing in India, 1995, DASSI, Quarterly, Vol. 14, Nos. 1 & 2.*

As you may see in this table, state of Kerala has drawn the attention of academicians and policy makers including a number of international agencies because from a narrow interpretation of development based exclusively on per capita income, it is a paradox. However, contrary to popular belief, Kerala is found to be more advanced than all other states in overall socio-economic development. The current explanations attribute Kerala's achievements in health to discrete variables such as women's status, literacy, health services utilization etc. From the various data available it can be argued that the overall development in other sectors like communication, transportation, reliable source of power supply, literacy etc. is a pre-condition for effective organisation and utilization of health services. It is not possible to apportion the credit for health status improvement between various aspects of development which are highly inter-dependent and inter-correlated.

Though we may find corresponding relationship between per capita income and health indicators in the case of most of the States yet Gujarat and Haryana present a different picture. For instance, despite having high per capita income, the IMR and the under-5 mortality is quite high in these two States. On the contrary, Tamil Nadu with low per capita income performs better than these two States on these two indicators.

What we have discussed in this section is as follows:

- Per capita income is a clear and most accepted indicator of development.
- The international and national contexts revealed that there is a positive relationship between per capita income and health indicators.
- However, there are exceptions to this as some countries with low per capita income have achieved higher level of health status than those countries with higher per capita income. This is evident both in the international and national contexts.
- These trends also indicate that economic growth may be a necessary condition but it is not a sufficient condition to achieve better health status for the people. The data also reveal that improvements in health status is determined by the amount allocated for the health sector.

Activity 3

Based on the data given in Table 3, present a brief comparative note on different States and identify the relationships between health and development.

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2.5 LET US SUM UP

In this Unit, we have discussed the interlinkages between development and health. Initially, we have gone through the key issues in development. In that we have discussed the factors crucial to development. They are (i) production or growth and (ii) distribution or meeting human needs. We have also argued that unless the poor have the right to ownership they may not enjoy the benefit of growth.

The relation between health and development, as you have seen, is complex and dynamic. Not only development has to be considered in its widest sense, but it has to be also recognised that actions done in different social sectors apart from health services and economic development have a deeper influence on health. At the same time, the adverse effects due to development programmes also need to be understood.

Inter-country and intra-country comparisons show that economic development alone is not a sufficient indicator for understanding the relationships between health and development. This is evident both at the international and country level where there are countries or States which have achieved better health despite low per capita income. You might, therefore, view development as an integrated and inter-dependent process between social and economic components.

Thus even within India, we have diverse situations which do not warrant the application of any uniform model. They also rule out the possibility of piece-meal solutions to any socio-economic problem. Improvement in the health status of the people requires an integrated approach to deal with various socio-economic problems like poverty, unemployment, illiteracy, communication, womens' status and ill-health.

2.6 KEY WORDS

Infant Mortality Rate : Number of deaths of infants (below one year) in a year per 1000 live births.

Gross Domestic Product (GDP) : The aggregate money value of all final products produced in a country during a year. A final product is one which is available for immediate consumption or investment.

Pathogenic Factors : The external agent or factors responsible for a particular disease. It can be a virus or bacteria. In non-health sectors, it can be social factors.

Per-Capita Income : The national income divided by the population of the country or the average income per head.

State Domestic Product (SDP) :Same as GNP but with respect to the domestic production within the State.

Vector-borne Diseases : Diseases caused by an agent carrying the disease bacteria or virus. In the case of malaria, the mosquito which carries the parasite is called the vector.

2.7 SUGGESTED READINGS

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2.8 MODEL ANSWERS

Check Your Progress 1

1. The approaches to development we have discussed are:
   i) Economic growth or production oriented approach
   ii) Human needs or distribution based approach
2. The three conditions which led to the emergence of human needs approach are :
   i) Alarming rate of poverty
   ii) Unequal distribution of results of growth
   iii) Exploitative dependency relationships
3. The benefits of growth do not always help the poor because:
   i) The distribution of benefits is not equitable. The poor get the least share
   ii) This is because the right to distribute is with those who own the means of production

Check Your Progress 2

1. The factors responsible for the decline of mortality caused by typhoid, cholera, T.B. and small pox in the 19th century are:
   i) changes in the rising standard of living
   ii) introduction of hygienic measures such as safe drinking water, sewage disposal etc.
   iii) Massive investment in health services
   iv) Better housing, education and other social support programmes
2. The salient features of intersectoral approach to health are:
   i) Actions initiated in social sectors have a deeper influence on health
   ii) Socio-cultural and political processes promote health and well-being
   iii) Health status depends on the distributive process, the degree of equity and the socio-political structures that enable the people to articulate their needs and participate in soci decision making.

Chek Your Progress 3

1. The linkages between health and development from the positive impact of development are:

   i) Economic growth if distributed equitably will enable the poor to meet their basic needs and to have access to health care services

   ii) Economic empowerment of poor can strengthen the process of social mobilisation to demand for better health care services

   iii) Social mobilisation process will also compel the state to build the basic infra-structural facilities and provide access to education for all.

2. The negative impact of development on health is:

   i) Diseases caused by industrial pollution

   ii) Contamination of water and soil by pesticides used for intensive agriculture and thereby contaminating the food.

   iii) Outbreak of vector borne and water borne diseases caused by major irrigation schemes.

   iv) Depletion of natural resources, such as forests due to mega projects which displace the original inhabitants and thereby forcing them to be the victims of ill-health.

Check You Progress 4

1. The reasons for the higher level of health in Srilanka are:

   i) Self-sufficiency in food

   ii) Reduced regional disparties and inequalities

   iii) Meeting the basic needs of people is given top priority in the development planning

   iv) Universal free education, effective food rationing system and improved rural housing.

UNIT 3 DEVELOPMENT OF HEALTH CARE SERVICES IN RURAL INDIA : A REVIEW

Contents

3.0 AIMS AND OBJECTIVES

In the previous unit, we have discussed the inter-linkages between health and development. In this unit, we are going to discuss the evolution of health care services in rural India as we believe that learning its history is important to the understanding of the current status of health care services in rural India. After reading this unit, you will be able to :

- understand the nature of health care services in preindependent India.
- describe the various policies which governed the health care services in pre and post-independent India.
- understand major land marks in health services development.
- explain the various organisational structures developed for the delivery of health care services.
- understand the role of primary health centre in promoting rural health services.

3.1 INTRODUCTION

India has a rich health heritage. An analytical review of the past history assumes importance because it enables us to understand how at various stages different health care systems have been evolved to deal with health problems. India's ancient health care system was quite vibrant and it reflected the cultural practices of the rural communities. There was a close link between the people and their environment. The merits of the ancient systems of medicine can be assessed from the fact that even now they are considered the best to deal with some of the health problems.

However, during the colonial period, with the advent of modern medicine, serious attempts were made to degrade the scientific vigor of Indian medicine. As a result, modern medicine began to emerge as the dominant one to deal with India's health problems. The rise of modern medicine created a rift in the provision of health care services. Because those who enjoyed the benefit of modern medicine were the army personnel and the city based civilians who served the colonial regime.

However, this scenario began to change in the wake of India's freedom from colonialism. Health care for the rural masses occupied a key position in independent India's health policies and programmes.

Against this backdrop, we shall first discuss the pattern of health care services during pre-colonial and colonial period. Secondly, we shall discuss the various measures undertaken to deal with rural health problems after independence. Finally, we shall enumerate at length the role of Primary Health Centre (PHC) in the context of rural health care services.

3.2 HEALTH CARE SERVICES IN PRE-INDEPENDENCE ERA

Needless to say that the history of health care services is as old as human history. Since the dawn of human civilisation, health care has been an important human need. This is because, historically, humanity has been involved by killer epidemics and chronic and endemic diseases. The people of ancient era were the victims of nutritional disorder, occupational risks, pain of child bearing, inadequate child care, female infanticide and abortion by artificial interference.

Though the writings of the history of ancient health care system is replete with such findings, they also reveal the glorious past of India's health heritage. We shall discuss this issue in two parts viz. i) Pre-colonial era; and ii) Colonial era.

3.2.1 Pre-colonial Era

As you know, it is very difficult to mention the date or year indicating beginning of this era. However, you may get some clue to this dilemma as you proceed further reading this unit.

Scholars who have studied the history of India's health heritage differ in their views on the earliest date to describe the beginning of this era. Some say that it dates back to 5th century BC. However others, drawing reference to the migration of the Aryans to the Indus Valley contend that it dates back to 2nd millennium BC. These factors not withstanding, let us see what the scholars say regarding the ancient health care practices.

Marshall (1931) and Martic-Ibanez (1960) give an account of the manifestly high standards of environmental sanitation and the high degree of health and consciousness among the people of Indus valley civilisation. Similarly, Chattopadhyaya (1977) also accounts for the effectiveness of vedic medicine. The striking features of the health care in the Indus valley civilisation, according to Banerjee (1985) is the assumption that there is a close interaction between body, matter and environment. This form of holistic thinking in the field of health, at the theoretical level is also focused in the ancient texts such as Charaka, Sushruta and Samhita (Mukhopadhyay, 1992). The other sources which are used to describe the scientific vigor of ancient health care are (i) Milindepantra (1st century) the Buddhist medical text, (ii) the second Rock Edict (279-236 BC) of Emperor Ashok Maurya, and (iii) the writings of Al Biruni (A.D. 973-1048), the visiting scientist from Central Asia, on the effectiveness of herbal medicine.

According to Shankar (1992) the social streams which describe the traditional health system in India are (i) lok swasthya paramparas and (ii) shastriya stream. The former refers to the "practice of indigenous health of the level of popular science which relies on immediately available local resources like flora, fauna and minerals." Housewives with their knowledge of food and home remedies, traditional birth attendants, bone setters, practitioners of acupressure and traditional village level herbal medicine workers represented such a tradition. On the contrary, the second stream refers to the scientific or shastriya aspect of the Indian traditional health services. This consists of codified and organised knowledge with sophisticated theoretical foundations expressed in several regional manuscripts covering all branches of medicine and surgery. The systems of Ayurveda, Siddha and Unani are examples of this stream.

It may be necessary at this juncture to present a brief description of each of these systems of medicine.

- **Ayurveda :** It is one of the ancient systems of medicine. The term Ayurveda is used to signify the entire corpus of the medical wisdom. The first component "ayur" signifies "life" (tivitam) and the other component 'veda' refers to a

branch of learning (vidya-sthoma). Ayurveda would thus mean, "the science or art of living". Ayurveda is said to have eight main branches. They are :

(i) Kaaya chikithsa	–	General Medicine
(ii) Baala chikithsa	–	Paediatrics
(iii) Graha chikithsa	–	Psychiatry
(iv) Oordhwaanga chikithsa	–	ENT and Opthalmology
(v) Shalya chikithsa	–	Surgery
(vi) Damshtraa chikithsa	–	Toxicology
(vii) Jaraa chikithsa	–	Geriatrics
(viii) Vrushaa chikithsa	–	Virilification/Rejuvenation

- **Siddha** : The term siddha means achievement. It is also one of the ancient systems of medicine practiced mostly in Tamil Nadu. It is strongly rooted in the belief that there is a close link between man and his environment. One of the main features of Siddha system is that its treatment is not oriented towards diseases but it entirely focuses on the person (patient), his environment, habits, psychological constitution etc.
- **Unani :** This system of medicine, initially developed in Greece, is said to have been introduced in India by the Arabs and the Persians in the 19th century. In India, this system was amalgamated with Ayurvedic and other native medical systems.

As we have seen in this section, the ancient systems of medicine were strongly rooted in the culture of the people. Besides being scientific, they were also epidemiologically sound as they emphasised strongly the linkages between man, disease and the environment. This approach to treatment is holistic. That's why they are still found very useful and they are sought after by the majority population.

Check Your Progress 1

Note : i) Space is given below for your answers.
ii) Check your answers with the ones given at the end of this unit.

1. What are the texts used to know the scientific vigour of ancient health care systems in India?

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2. Name the eight branches of Ayurveda.

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3.2.2 Colonial Period

The health care services during the colonial period underwent many changes. The major changes among them were the introduction of Allopathy, the 'modern' medicine, class based provision of health care services and the appointment of committees/commissions to study the health problems for recommending ways and means to combat diseases.

Allopathy medicine was brought to India by the British as early as in the 16th century. The modern medicine began to flourish during the colonial rule for the following reasons. Firstly, "a new elite class which arose from the educational system introduced by the British, increasingly took up the profession of modern medicine", (Bose, 1983). Secondly, the modern medicine was made to serve essentially the colonial military and the civilian establishments. This was done to protect the military from the outbreaks of epidemics and other communicable diseases. It was considered crucial for promoting the trade interests of the colonial regime. Thirdly, attempts were also made to project the Indian systems of medicine as rudimentary, unscientific and ineffective to deal with the major health problems of the country.

There was class bias in the provision of health care services during the colonial period. As we have seen in the preceding paragraph, modern health care services were made available to the small military population but they were denied to the majority population of the country.

The exclusion of the rural population from the purview of modern medicine is also evident from the fact that all the health care services were concentrated in the cantonments and district headquarters.

However, the health care facilities were also extended to the working class on the assumption that workers can be productive only if they are healthy. This assumption led to the introduction of minimum immunization services against small pox and urban based essential curative services.

Prior to the transfer of colonial power from the East India Company to the British Crown in 1857, no efforts were made to evolve a health policy aimed at improving the health status of the rural societies. With the transition of power, attempts were made to study the health status of the people and make appropriate recommendations. The first attempt was the appointment of a Royal Commission in 1859 to report on the sanitary state of the Army in India. Based on the recommendations of this report in 1863 Sanitary Commissioners were appointed. Outbreak of epidemic diseases such as plague compelled the British regime to appoint the Plague Commission which submitted its report in 1904.

Though the health care services provided by the colonial government were essentially aimed at controlling epidemics, they did have some positive impact on the health status of the people. Among them, the notable ones are the success in containing the incidence of plague, and in the field of malaria control (Bose, 1983). Yet another contribution of the colonial rule to the health care services was the transfer of the subject of public health to responsible ministers under the Government of India Act of 1919. The initiatives provided some basis for the formulation of health care policies and programmes in the Independent India.

3.3 HEALTH CARE SERVICES IN INDEPENDENT INDIA : A RETROSPECTIVE

In this section, we shall discuss some of the landmakrs in the evolution of health care services till the end of 1980s (Block 2 of this Course deals with the current health care programmes and services).

When India became independent in 1947, health status of the people was one of the poorest in the world. Expectation of life at birth was 26.9 for males and 26.5 for females. Fifty percent of deaths were among children under the age ten and in this group half of the mortality was during the first year of life. Malaria, Tuberculosis, Small pox, Cholera and other communicable diseases accounted for the majority of deaths in India. The availability of medical services were highly inadequate. Health services in the rural areas were almost non-existent.

However, the health care system which was dormant during the colonial regime began to evolve at the dawn of Inida's independence. It underwent considerable changes both quantitatively and qualitatively. These changes were brought about largely as a result of experience during the implementation of health care programmes on the recommendations of several committees appointed at different periods of time. Therefore, let us understand evolution of health care services by examining some of the important Committees on

health appointed after Independence. At this point, we would earnestly request you to read once again section 1.3 of Unit 1, Block 2, RDD 2 which will give you a detailed account of the evolution of health care services in India after independence. We shall begin with two important reports on public health which had appeared around 1947 when India became Independent. They are (i) the Sub-Committee on National Health of the National Planning Committee (herein after called as sub-committee) and the Health Survey and Development Committee (herein after called as The Bhore Committee).

3.3.1 The Sub-Committee on National Health

The sub-committee in its final report in 1948 gave the following recommendations:

(i) Curative and preventive health care services have to be integrated in a single State agency.

(ii) It was also stressed that the maintenance of the health of the people was the responsibility of the State. The sub- committee highlighted the importance of training large number of health workers in practical community and personal hygiene, first-aid and simple medical treatment.

(iii) It was suggested that the aim of providing the health worker for every thousand population need to be realised within five years.

(iv) The ultimate objective should be to have one fully qualified medical man or woman for each 1000 persons and one hospital bed for every 600 persons.

(v) The sub-committee also said that practitioners of the ayurveda and unani systems were to be drawn into the State health system.

(vi) It also endorsed the findings and recommendations of the Bhore Committee which had by then submitted its report.

3.3.2 The Bhore-Committee Report

The Bhore Committee, although appointed by the British, was also influenced by the aspirations of the national movement. This Committee was set up in 1943 under the Chairmanship of Sir Joseph Bhore. It is also known as the Health Survey and Development Committee. The report was submitted to the government in 1946. It has been said that the blueprint of the delivery system of health services in independent India was provided by this Committee. The distinctive features of the Bhore Committee report are the guiding principles which governed its recommendations. Among them the notable principles are as follows :

Principles

1. No individual should be denied adequate medical care because of inability to pay for it.

2. The health services should be able to provide all the consultancy, laboratory and institutional facilities necessary for proper diagnosis and treatment.

3. The health programme must, from the beginning, lay special emphasis on preventive work.

4. Medical relief and preventive health care must be urgently provided as soon as possible to the vast rural population of the country.

5. The health services should be located as close to the people as possible to ensure the maximum benefit to the communities served.

6. The active co-operation of the people must be secured in the development of health programmes.

7. Health development must be entrusted to ministers of health who enjoy the confidence of the people and who are able to secure their cooperation.

8. Social orientation of medical practice is essential for guiding and protecting people to a healthy life.

Recommendations

The Bhore Committee made two types of recommendations; the long-term and a short-term plan. The short-term plan was to cover two five year periods and the long-term was envisaged for a period stretching over twenty to forty years.

The major recommendations are as follows :

(i) A living wage for all the workers, improvement in agricultural and industrial production, elimination of unemployment, suitable housing and clean environment are essential for healthy living.

(ii) The basic unit of planning and administration of health care services is the district.

(iii) In the long-term plan, the smallest health unit was designated as a Primary Health Unit (PHU) with a population coverage of ten to thirty thousand.

(iv) Each PHU will have 75 beds.

(v) Each PHU will have six medical officers and six public health nurses in addition to the nursing staff for the 75 bed hospital.

(vi) About fifteen to twenty five primary units have to be assisted and supervised by a Secondary Health Unit (SHU).

(vii) There would be three to five SHUs under the District Health Organisation serving a population of about three million.

(viii) A health centre was to be established at each district headquarters with total bed strength of 2500.

(ix) There would be 650 beds at the Secondary Health Unit.

(x) As a short-term approach, for the first two five year periods, the emphasis would be on 30 bed hospitals, one for every two primary health units.

(xi) District Health Organisations were to be established in every district to cover five primary units and one secondary unit each and gradually increased to 25 primary and two secondary units.

(xii) The setting up of District Health Centres was to be taken up only after achieving the short-term targets.

(xiii) There must be a separate provision for the appointment of staff and resources for special services to deal with more widespread diseases such as malaria, tuberculosis, leprosy and veneral diseases.

(xiv) Medical practice must be socially oriented to meet the needs of the people and they must be given enough opportunities to participate freely in the development of health care services.

Thus we find that the sub-committee and the Bhore Committee recognised the need for inter-sectoral approach to health service development. The recommendations of the Bhore Committee continue to shape the health care services even today.

Check Your Progress 2

Note : i) Space is given below for your answers.

ii) Check your answers with the ones given at the end of this unit.

1) What is the ultimate objective of the Sub-Committee on National Health ?

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2) Identify two differences in the recommendations of Sub-Committee on National Health and Bhore Committee.

3) Mention two long-term and two short-term recommendations of the Bhore Committee.

3.3.3 The Initial Period

The recommendations of the Bhore Committee became the blueprint of the delivery system of health services in independent India. This is evident from the fact that the interim government which was formed prior to independence in June, 1946 accepted the recommendations of the Bhore Committee. The Constitution of independent India also accepted health services to the entire population as one of the Directive Principles of State Policy.

Health Care Services in rural India started with the establishment of the First Primary Health Centre in October, 1952. These were established as part of the Community Development Programme based on the objective of bringing about multi-faceted development of rural areas in the fields of agriculture, rural industry, education, social organisation, communication, transport etc. These were to be achieved through extension education, community self-help and government action. Nutrition, sanitation and water supply were also included within the purview of the Community Development Programme(CDP). The delivery of health services through CDP organisation was based on the understanding of inter-sectoral approach for health care and on the concept of community participation. The major functions of the Primary Health Centre under the integrated-curative, preventive, promotive approach of health services development were 1) medical care, 2) control of communicable diseases, 3) promotion of maternal and child health, 4) collection of vital statistics, 5) protection of water supply and environmental sanitation, and 6) conducting school health programme. Later, provision of family planning services was also added to the list. The PHC in each block was conceived as a nucleus for all health activities in the area.

Although PHC network was established throughout the country there were a number of teething problems especially regarding availability of staff. A skeleton staff comprising of one medical officer, one sanitary inspector, one leading health visitor, one compounder and four auxiliary Nurse Midwives was expected to cover a population of 60,000. The problem areas were availability and training of staff, adequate supervision and guidance, lack of funds, shortage of materials, equipments, transport, buildings etc.

3.3.4 Health Care Services in the Sixties

The report of the Health Survey and Planning Committee (The Mudaliar Committee) provides us the glimpse of health care services in the sixties. Therefore let us see the recommendations of this report.

The Mudaliar Committee assessed the performance and operation of Primary Health Centre Scheme and submitted its report in 1961. The report observed that the primary health centre programme as it developed bears no resemblance to the one visualised by the Bhore Committee. It recommended that before expanding the network, the existing services need to be consolidated. For this the Committee suggested that the staffing in existing PHCs need to be strengthened to reach the level as per the Bhore Committee recommendations. Instead of 60,000 population, the PHCs should serve a population of 40,000. It also recommended that no new PHCs should be opened without the full staff strength and that the non-PHC areas could be served by mobile services.

However, contrary to these recommendations, the early sixties saw considerable expansion of PHC network. The launching of National Malaria Eradication Programme, National Small pox Eradication Programme and the change in strategy of family planning from a clinic-based (cafeteria) approach to extension approach was instrumental in the expansion The number of both grass root-level workers as well as supervisiory staff were increased especially keeping the implementation of vertical programmes in mind.

Before we go to the next section, it may be useful to know the staffing pattern that existed in the sixties.

In the sixties, the staffing pattern was as follows :

The Auxiliary Nurse Midwife (ANM) each serving a population of 10,000 was responsible for Maternal and Child Health work and family planning among women. Every four ANMS were supervised by a Lady Health Visitor (LHV). A Family Planning Health Assistant (FPHA) was meant to do family planning work among men. There were four FPHAs supervised by a Block Extension Educator. The Basic Health Worker (BHW) did the Malaria work. Every four BHWs were supervised by a Health Inspector. In some PHCs, there were also vaccinators and four of them were supervised by a Sanitary Inspector. The Sanitary Inspector looked after the environmental sanitation in the Block. There were two Medical Officers, one being the Medical Officer-in-charge.

3.3.5 Health Care Services in the Seventies: Towards Integration

Though the integrated approach to health care services was envisoned in the Bhore Committee, it can be said that serious concern towards this goal was expressed in the seventies. This is evident from the recommendations of the Multipurpose Workers Committee and India's active participation in the Alma Ata Conference on Primary Health Care.

Formulation of different disease control programmes and change in strategies on Family Planning resulted in many vertical programmes at the PHC level although the Bhore Committee had recommended an integrated approach in the delivery of health services. In 1963, a Committee appointed by the government of India (Chadha Committee) recommended that the services at the PHC have to be integrated and the rural population may be given health and family planning services through male and female Multi-Purpose Workers. Each MPWs should serve a population of 10,000 at the initial stage. However, the importance attached to family planning work led to the continuation of uni-purpose workers for family planning.

Committee on Multi-Purpose Workers

In 1973, the Committee on Multi-Purpose Workers (Kartar Singh Committee) reviewed the function of PHCs and noted that there is lack of coordination among the various health workers. The Committee felt that the smallest unit of population could be better served by coordinating the diverse programmes and pooling the personnel.

Some of the recommendations of this Committee were :

1. One male health worker (Multi-Purpose) for a population of six to seven thousand initially.

2. One female Health worker (ANM) for a population of ten to twelve thousand.

3. Integrated training for all workers.

The short-term objective of the Multi-Purpose Workers Scheme was the establishment of a health delivery system in rural areas with a male and female Multi-Purpose Worker (MPW) each for a population of 5000.

Check Your Progress 3

Note : i) Space is given below for your answers.

ii) Check your answers with the ones given at the end of this unit.

1. Fill in the blanks.

a) The first Primary Health Centre was established in ——— ———.

b) Initially rural health services was included under ——— ——— programme.

c) The delivery of services through Multi-Purpose Workers was originally suggested by ——— Committee.

d) Katar Singh Committee in 1973 reviewed the functioning of ———.

e) The Mudaliar Committee assessed the performance and operation of ———.

f) ——— Committee recommended that the services at the PHC have to integrated.

g) Multi-purpose worker became a uni-purpose worker because of his/her busy involvement in ——— activities.

3.3.6 People's Health in People's Hands

In 1977, the new government at the Centre evolved a new programme called Community Health Worker Scheme. This was another major landmark in the health services development in India. The objective was to provide health services to the rural population through village level community workers. Seven hundred seventy seven blocks out of around 5400 administrative blocks were chosen for the first-phase of the scheme.

The CHW was chosen by and from the Community and provided with the necessary know-how and materials for handling minor ailments and for providing health education to the community.

The selection of CHWs was done at the village level itself, initially by the village panchayat and then by the two Medical Officers in consultation with the Block agencies.

The training of CHWs was at the PHC itself, by the PHC staff for a period of three months. The trainees were given a stipend of Rs.200 per month, a simple medicine kit and a manual with simple diagrams. After the training, they were given an annual allowance of Rs.600 and Rs.600 worth of medicines per annum.

Although the programme was meant to provide basic health care to the rural masses, it had a number of shortcomings. Some of them are :

1. Nature of social structure and social relations which does not allow proper involvement of community in the selection of CHWs.

2. The training was provided by field workers who themselves had failed to properly deliver the services.

3. It was also assumed that the programme could succeed despite of largely medicalised and highly professionalised nature of health services.

4. Some of the CHWs turned into quacks after setting up their own 'clinics'. There were also demands that the workers should be made permanent. The name of the scheme was changed from Community Health Workers to Guides and finally to Volunteers. The ideal of a Community Volunteer, therefore, could not be realised through the programme.

These short-comings resulted in the virtual neglect and collapse of the programme in the later years.

3.3.7 Emergence of Primary Health Care

The need to evolve an integrated approach to health care gained momentum both at the national and international level with the emergence of Primary Health Care. However, prior to the evolution of Primary Health Care the plan documents reflected the need for such an approach. For instance, a package called the Minimum Needs Programme was evolved in the fifth plan (1975-79) which contained rural health, nutrition, environmental improvement of urban slums, water supply, rural housing, rural roads, electrification, elementary and adult education etc. One could see an effort towards an integrated approach to provide basic needs in the rural areas. Such an effort received world wide attention in 1978 at the Alma Ata conference which called for Health for All by 2000 A.D.

Health For All

In 1978, India signed the Alma-Ata declaration on Primary Health Care. The basic principles of Primary Health Care were democratisation of health services and social control of medical technology. It gives primacy to people — who are involved at all stages of health service development such as problem identification, programme formulation and evaluation of health programmes. As a follow-up on the commitment to primary health care, the government also had drawn a detailed perspective plan to attain the goal of **Health for All by 2000 A.D.** The Indian Council of Social Science Research - Indian Council of Medical Research (ICSSR-ICMR) study group also deliberated upon the issue of **Health for All** by 2000 A.D.

National Health Policy

All these efforts finally led to the National Health Policy of 1982 (published in 1983). The policy underlined the need to provide universal comprehensive primary health care services relevant to the actual needs and priorities of the community at a cost which people can afford. It called for restricting the health services around the following broad approaches :

1) provision of primary health care with the organised support of volunteer, auxiliaries, para-medics and adequately trained multi-purpose worker.

2) large scale transfer of knowledge, simple skills and techniques to health volunteers, selected by the community and enjoying their confidence.

3) efforts to build up individual self-reliance and community participation.

4) a well-worked out referral system to provide support to primary health care.

5) a net work of sanitary - cum - epidemiological strategies to tackle the range of health problems.

6) support to voluntary agencies in health.

7) establishment of centres to provide specialist treatment when necessary.

8) Special efforts in mental health and rehabilitation of the disabled.

9) Priority to people living in tribal, hill and backward areas and also disease-prone areas.

The policy can be considered as a response to the predominant thinking at that point of time especially the nature of primary health care and **Health for All** by 2000 A.D. It also contained an analysis of the poor state of health status and health services. It stated that the adoption of health, manpower development policies and emphasis on curative care based on the western model were contrary to the real needs of the people and the socio-economic conditions. It admitted that such an approach had been at the cost of comprehensive primary health care.

3.4 ROLE OF PRIMARY HEALTH CENTRE IN RURAL HEALTH CARE SERVICES

Establishment of Primary Health Centre and sub-centre has been one of the significant achievements in the field of health care delivery in rural India. In this section, let us briefly discuss the structure, functions and source of the programmes of PHC.

3.4.1 Structure and Functions

The Chief Medical Officer in the district is responsible for organising all health activities in the district. Each district is covered by 8-12 PHCs. Under each PHC, there are about 8-10 sub-centres. With the implementation of the Multi-purpose Workers Scheme and the Community Health Volunteer Scheme, the Community Health Volunteer serves population of 1000. The male and female Multi-Purpose Worker have the responsibility of providing services to a population of 5000 to 10,000. The two MPWs are located in the sub-centre. The Medical Officer has the overall responsibility of the block with a population of 80,000 to 1,00,000. One or two additional medical officers may be available to provide support. Male and female Health Assistant, a Sanitary Inspector and a Block Extension Educator act as the supervisors of the field staff. Following are the key functions which a PHC is expected to carry out:

- Medical care
- Mother and Child Care including family planning
- Safe water and basic sanitation
- Prevention and Control of local endemic diseases
- Collection and reporting of vital statistics
- Health education
- Referral services
- Implementation of national health programmes
- Training of health guides, health workers, health assistants and local dais

Inclusion of primary health care in the Twenty Point Programme started a new phase in rural health care in the eighties. This programme envisaged : acceleration of health care activities for the Scheduled Tribes and Scheduled Castes, further strengthening of MPW scheme and CHV Scheme and upgradation of existing PHCs into Community Health Centres and establishment of new PHCs for every 30,000 population by adding extra field staff to the sub-centre or by opening new PHCs. It was proposed to increase the number of PHCs by reducing the population covered by them from 80,000 - 1,00,000 to 30,000. The main feature of a Community Health Centre (CHC) or an up-graded PHC is a 30-bed hospital. It is provided with all specialist services.

The staffing pattern has also undergone changes from the earlier one. The staffing pattern in the new PHC is : Medical Officer, Community Health Officer (for public health), a pharmacist, two persons for secretarial work and four supporting staff. In the CHC, the staffing pattern is:

1) Four Specialists (Surgeon, Physician, Gynaecologist, Paediatrician)
2) Three general duty medical officers (public health, anesthetist, one from indigenous systems of medicine)
3) Eight nurses
4) Two pharmacists
5) Two Laboratory technicians
6) One X-ray technician
7) One extension educator
8) One opthalmic assistant
9) Sixteen ward staff, and
10) Ten other ward staff.

Activity 1

Visit a PHC in your block and find out the following:

1) Health care facilities available

2) Staffing pattern

3) Which section of the population gets maximum benefit of that PHC.

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3.4.2 Major Health Programmes in the Primary Health Centre

Let us now briefly understand some of the important health programmes undertaken through the Primary Health Centre. (For a detailed account of health programmes, please read Block 2 of this course)

Malaria: The National Malaria Control Programme (NMCP) was launched in 1953. The aim of the programme was to spray all Malaria affected area with DDT. The programme was a success and therefore it was decided to convert the programme into National Malaria Eradication Programme (NMEP), which was one of the biggest vertical programmes in the country. However, when the programme in large number of areas shifted from the preparatory phase to the maintenance phase, there was a spurt in the incidence of malaria in 1966. The goal of eradicating malaria by 1966 remained unachieved. As a result of the setback, the programme put into practice a revised strategy called the Modified Plan of Operation (MPO) in 1977. The objectives were to prevent death and reduce mortality as well as to consolidate part gains.

Tuberculosis: The National Tuberculosis Programme was formulated in 1962. It was a nationally applicable and epidemiologically effective programme. The programme was based on the assumption that a large number of T.B. patients were actively seeking treatment at various health institutions and they could be diagnosed by using a simple technology of sputum examination. The District Tuberculosis Centre (DTC) also served as a referral institution for the programme.

Blindness: The National Trachoma Control Programme was initiated in 1963, through specially trained para-medical workers located at primary health centres. The control strategy was revised in 1969-70 to integrate the programme with general health services. In 1976, the National Trachoma Programme was renamed as the National Programme for Prevention of Visual Impairment and Control of Blindness. In 1981, the name was again changed to National Programme for Prevention of Blindness. The trachoma programme under this is being implemented in 3550 PHCs in 293 districts. It has mobile units which provide community eye-care services at the PHC and sub-centre.

Mother and Child Health (Immunisation and Diarrhoeal Diseases): The integrated Child Development Scheme, the National Programme for Prevention of Blindness, the Expanded Programme on Immunisation and the programme for Control of Diarrhoeal Diseases are the major special programmes which have important elements of Maternal and Child Health presently known as Child Survival and Safe Motherhood Programme (CSSMP).

The Expanded Programme on Immunisation (EPI) was launched in January, 1978. The objective of the programme was to reduce morbidity and mortality from diptheria, pertusis, tetanus, polio- mytetis, measles, tuberculosis and typhoid fever. This permanent programme for children is being implemented through PHCs and sub- centres in rural areas. Under the diarrhoea diseases control programme, Oral Rehydration packets are being supplied to patients in rural areas through Multi Purpose Workers.

These are some of the major health programmes apart from the family planning programme, implemented through PHC.

3.5 LET US SUM UP

In this unit, you might have realised that a number of Committees have played a key role in the health services development in India. Among them the Bhore Committee report stands out as a blue-print for the health care delivery system.

The most note worthy feature of health services development is that India could establish a wide network of health care institutions through which health care needs of the rural population are being met. However, there are number of limitations in the delivery of health programmes. Shortage of staff, funds, drugs, buildings, lack of effective supervision, vertical nature of many programmes, over-emphasis on family planning etc. are some of them. At the same time, the programmes are being constantly modified without any epidemiological basis. In any case, there is no doubt that the Primary Health Centre network remains as the lifeline for the rural masses in India.

3.6 KEY WORDS

Allopathy : Treatment of disease with drugs having opposite effects to the symptoms

Colonialism : Economic and political exploitation of weak or backward people(nation) by a larger power.

Epidemiology: Study of distribution and determinants of disease.

3.7 SUGGESTED READINGS

Banerjee, D, 1985. *Health and Family Planning Services in India: The Epidemiological, Socio-cultural and Political Analysis and a Perspective,* Lok Paksh: N.Delhi.

India, Government of, 1946. *Health Services and Development Committee. Vol. I and II.* Delhi, Manager of Publications.

3.8 MODEL ANSWERS

Check Your Progress 1

1. The texts used to know the scientific vigour of ancient health care system in India are:
   i) Milindepantra, the Buddhist medical text.
   ii) The Second Rock Edict of Emperor Ashok Maurya.
   iii) The writings of Al Biruni, the visiting scientist from central Asia.
2. The eight branches of Ayurveda are:
   i) Kaaya chikithsa – General Medicine
   ii) Baala chikithsa – Paediatrics
   iii) Graha chikithsa – Psychiatry
   iv) Oordhwaanga chikithsa – ENT and opthalmology
   v) Shalya chikithsa – Surgery
   vi) Damshtraa chikithsa – Toxicology

vii) Jaraa chikithsa – Geriatrics

viii) Vrushaa chikithsa – Virilification / Rejuvenation

Check Your Progress 2

1. The ultimate objective of the sub-committee on National Health is to have one fully qualified medical man or woman for each 1000 persons and one hospital bed for every 600 persons.

2. Two differences in the recommendations of the following committees.

Sub-Committee on National Health	Bhore Committee
1. Curative and preventive health care services have to be integrated in a single state agency	1. The basic unit of planning and administration of health care services is the district
2. Maintenance of health of the people is the responsibility of the state	2. A living wage for all the workers, improvement in agricultural and industrial production, elimination of unemployment, suitable housing and clean environment are essential for healthy living.

3. The two long-term recommendations of Bhore Committee are:

   i) The smallest health unit was designated as a Primary Health Unit with a population coverage of ten to thirty thousand.

   ii) A health centre was to be established at each district Headquarters with a total bed strength of 2500.

   The two short-term recommendations of Bhore Committee are:

   i) Medical practice must be socially oriented to meet the needs of the people and they must be given opportunities to participate freely in the development of health care services.

   ii) For the first two five year periods, the emphasis would be on 30 bed hospitals, one for every two primary health units.

Check Your Progress 3

1. a) The first Primary Health Centre was established in October, 1952.

   b) Initially rural health care services was included under CDP.

   c) The delivery of services through Multi purpose workers was originally suggested by Kartar Singh Committee.

   d) Kartar Singh Committee in 1973 reviewed the functioning of PHCs.

   e) The Mudaliar Committee assessed the performance and operation of Primary Health Centre Scheme.

   f) Kartar Singh Committee recommended that the services at the PHC have to be integrated

   g) Multi-purpose worker became a uni-purpose worker because of his/her busy involvement in family planning activities.

UNIT 4 HEALTH AND NUTRITION STATUS IN RURAL INDIA

Contents

4.0 AIMS AND OBJECTIVES

Nutrition forms an integral part of health. It not only enables individuals to be active but also enhances people's ability to restrict infections and diseases. Good nutrition, therefore, is one of the essential pre-requisites for prevenive and promotive health.

This unit aims at giving you an overview of the health and nutrition status of the India's rural population and the factors contributing to the current status of health and nutrition. After reading this unit, you will be able to :

- identify and understand some of the indicators commonly used to assess health and nutrition status;
- describe the health and nutrition status of rural population in India;
- discuss the differences in health status between regions, socio - economic groups and sexes within the rural population;
- understand the factors influencing health and nutrition status in rural India.

4.1 INTRODUCTION

India has the dubious distinction of being self-sufficient in food production and having the largest number (75 million) of under five malnourished children in the world. Almas Ali (1992) described malnutrition as imperfect nourishment (malus-bad, nutrire-to nourish) and occurs when the demands of the body for certain nutrients are not met (under nutrition) or are met in excess (over nutrition). However, as you know, in India, the problem confronting majority population is undernutrition. Hence, in this unit we use the term malnutrition only to denote undernutrition and its attendant health disorders.

The inter-linkages between health and nutrition can be understood if we examine the factors influencing the nutrition status of people. We will find in this unit that the factors influencing nutrition also play a key role in determining health. For example, the key factors influencing the nutrition status are production and availability of food, purchasing power of the people, distribution of income and food, education and knowledge of nutrition. In unit 1, we have seen that these factors are used as the key determinants of health.

Against this backdrop, in this unit, we shall use available empirical data to understand the general pattern of health and nutrition, with special reference to rural India and understand how nutrition is linked to health. Then we shall go on to examine the differences in health and nutrition status across different regions, socio-economic groups and the sexes. We shall also trace the changes that have occured in it over the decades in this century, more

so since 1950 when planned development of the rural areas began on a large scale. Finally we shall examine briefly the factors influencing nutrition status. While doing this, we will reinforce the understanding that health status is a resultant of the interaction between human beings and their environment. The way in which different factors in relation to human beings and the environment interact with each other to produce the present health and nutrition status of the rural population will be examined in the last section of this unit.

4.2 HEALTH AND NUTRITION STATUS : AN OVERVIEW

Before we begin to study the data on measures of health and nutrition status in rural areas we must understand the linkages between health and nutrition status. Let us therefore, deal with them first.

4.2.1 Health and Nutrition : Linkages

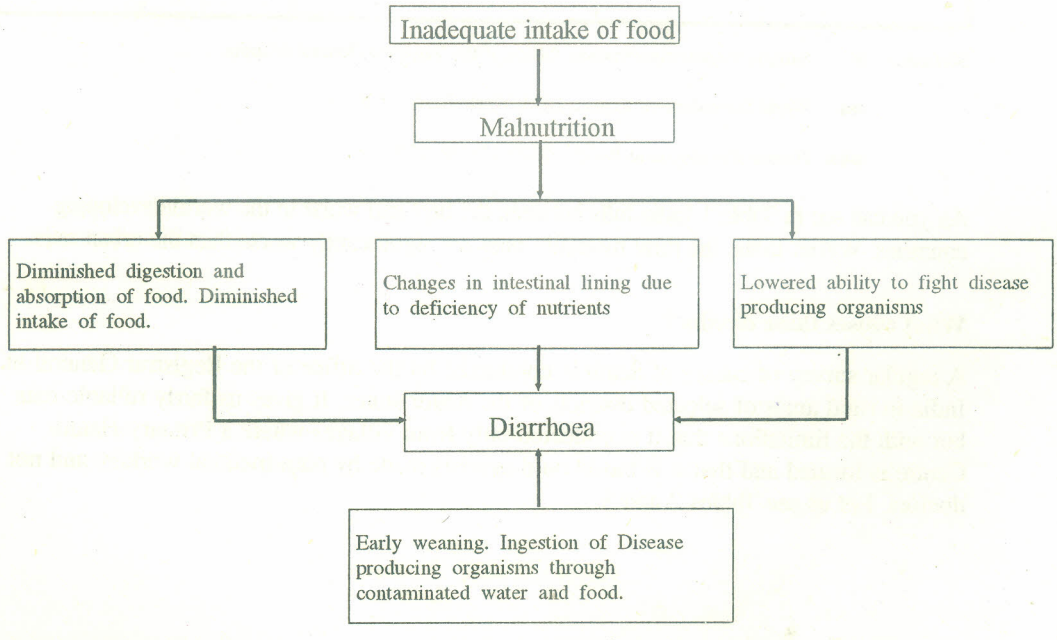
Health and nutrition are closely inter-linked. In fact, if (as we have discussed in unit - 1 of this block) health is taken to mean more than just absence of disease, then nutrition status is an integral part of health status. But because health status has conventionally been associated mainly with disease and death we continue to talk of nutritional status separately.

Nutritional status is dependant largely on food intake. However, the deficiency of nutrients is aggravated by the extra burden of disease. On the other hand, diseases are more severe and prolonged in the under-nourished, leading to much greater disability and death among them than among the well-nourished.

The malnutrition-disease cycle in under five children i.e. repeated episodes of severe disease and progressive deterioration in nutritional status is a well-known process that leads to much of the infant and child mortality in India. It illustrates the complex two way relationship between nutrition and disease process. Diarrhoeal disease is one of the commonest (and best studied) to interact thus with malnutrition. (see figure 4.1)

In this section we have been referring to under-nutrition and infectious diseases. There is, of course, association between malnutrition and non-infectious diseases, e.g. between over- nutrition and diseases such as diabetes or heart disease. But because, as we shall see later, under-nutrition and infectious diseases are the predominant types of

Fig 4.1: Interaction between Malnutrition and Diarrhoeal Disease in Children



nutritional/health problems in rural India, they are the ones we are most concerned with. This is also the reason why it is crucial that we understand the close link between the two

at the very beginning of this unit. The interlinkages can also be identified if we examine some of the indicators of health and nutrition status.

4.2.2 Health and Nutrition : Status

The health status of a population is assessed through measures related to mortality (death) and morbidity (disease). Nutrition status is assessed by food consumption patterns within the population and physical examination of its members for evidence of adequacy or deficiency of nutrients.

Maximum reliable data is available on mortality and much less on morbidity. Mortality is a clear cut event for which definite data is easier to obtain. Morbidity is much more complex — it may be mild or severe, acute or chronic, with definite clear symptoms or difficult to diagnose in the field situation. Also the factors which compound the problem of measuring morbidity are seasonal variations in disease patterns round the year, people's perceptions and memory of diseases etc.. Assessment of nutritional status has been done much more than assessment of morbidity but the reliability of nutritional data always remains in doubt. This is because of difficulties in recording actual food consumption and the difficulty in ascertaining what really is normal nutrition. The greater importance thereby given to mortality data leads to major gaps in our understanding of the health status. We, usually, see it more in terms of number of deaths, age at death etc. and tend to give lesser importance to the level of disease and physical development which, infact, indicate the quality of life of those living. Keeping this limitation in mind, let us study the data on health and nutrition status in rural India beginning with mortality indicators, then studying the extent and patterns of morbidity and finally the data on nutritional status.

1. **Health Indicators :** Let us begin our discussion by analysing the mortality indicators.

Table 1 : Mortality Indicators (1990)

Indicators	India		All India •	Best in the World	Worst in the World
	Rural	Urban			
1. Crude Death Rate	12.0	7.7	11.0	4.0•• (Costa Rica)	21.0•• (Ethopia)
2. Infant Mortality Rate	102.0	62.0	94.0	5.0•• (Japan)	165.0•• (Afghanistan)
3. Life Expectancy at Birth (Years)			57.9	78.6••• (Japan)	42.5••• (Afghanistan)

Sources : • Sample Registration System, Office of the Registrar General of India.

•• World Development Report, 1993, World Bank-OUP

••• Human Development Report, 1993, UNDP-OUP

As you can see in Table 1 India falls between the best and worst in the world/developing countries. Within India, the rural mortality rates are significantly worse than the urban rates.

What causes these deaths ?

A regular survey of causes of death is conducted by the office of the Registrar General of India in rural areas of selected districts of the major states. It gives us fairly reliable data but with the limitations that it is collected only from villages where a Primary Health Centre is located and that it is based on diagnosis made by para-medical workers and not doctors. Let us see Tables 2 and 3.

Table 2 : Percentage Distribution of Deaths by Major Cause-Groups in India (Rural) 1991.

Rank	Major Cause-Groups	1991
1.	Senility	23.8
2.	Coughs (Disorders of respiratory system)	18.9
3.	Diseases of circulatory system	11.1
4.	Causes peculiar to infancy	10.2
5.	Accidents & Injuries	8.5
6.	Other Clear Symptoms	8.3
7.	Fevers	7.3
8.	Digestive disorders	6.4
9.	Disorders of the Central nervous sytem	4.4
10.	Child-birth & Pregnancy	1.1

Source : Survey of Causes of Death, Office of the Registrar, Government of India.

Table 3 :Percentage Distribution of Infant Deaths by Major Cause Group in Rural India - 1991

Causes		% of Infant Deaths
1.	Causes particular to infancy	68.0
2.	Cough	15.0
3.	Fevers	5.4
4.	Disgestive disorders	3.5
5.	Diseases of circulatory system	3.0
6.	Other clear symptoms	2.4
7.	Disorders of central nervous system	1.6
8.	Accidents and injuries	1.1

Calculating from this data for the pattern of diseases one finds that even in villages with a Primary Health Centre, deaths, other than due to senility or accidents, are primarily due to communicable diseases (60%). At least 11.5% of them were directly due to malnutrition. The indirect impact of malnutrition is impossible to quantify from the data collected but it can safely be assumed that many of the deaths attributed to comunicable diseases would have been a result of the symbiotic relationship between malnutrition and the disease process. Thus infectious diseases and malnutrition together contribute over 70% of the diseases leading to deaths in rural India.

* Morbidity

While the causes of death discussed above give a broad pattern of illness to death in the population, it is being claimed that over the last few decades a shift is occuring in the disease pattern and that diseases such as hypertension and heart attacks (diseases which are the major killers in the industrialized countries) are becoming important in India as well. It seems that they are likely to be rising - with increasing pollution, chemical adulteration, increasing stresses of life etc. and an increasing life expectancy data. What data does show is that, even if these diseases are increasing, the infectious diseases and malnutrition continue to remain much more important.

Accidents and injuries constitute a serious health problem too. They figure high on the list of causes of death. Prevalence of disability is a specific and objective index than morbidity rates. It depends both on extent and severity of morbidity and the access to treatment services. The prevalence of disability as by the National Sample Survey round 36, 1981, shows that all types of physical disability are more in the rural areas. Out of every one lakh persons, 1844 have one or more type of disability.

In addition to this reporting of diseases by the medical institutions, surveys have been undertaken for specific diseases. A national level sample survey was conducted in 1957 for tuberculosis and smaller repeat surveys have been undertaken since then. The national programmes for control of leprosy, filaria, malaria and goitre provide data on number of cases detected by their surveillance activities. This is again very incomplete data but it provides the basis for estimation of the probable number of cases prevalent in the population. Some figures are given in Table 4.

Table 4 : Reported Data on Some Diseases in India

	Infectious Diseases (Point prevalence)		Deaths
Estimated figures			
1. Leprosy		400000	
2. Filaria	25000000	19000000	
3. Tuberculosis	3000000	12000000	40000
Reported figures			
4. Tuberculosis		1040772	9382
5. Diarrhoeal disease		9293286	4863
6. Acute respiratory infections		7888011	5585
7. Kala-azar		61841	5561
+ Meningitis			
+ Japanese encephalitis			
+ Kyasanur forest			
8. Malaria		2017823	268
9. Sexually transmitted diseases		1363838	
10. Cancers		45229	1828
11. Accidents			147023

Sources : Health Information of India-1990, Directorate General of Health Services, Annual Report, 1991-92 Ministry of Health and Family Welfare, Govt of India.

On the basis of data reported by government institutions and from estimates based on surveys it was thought that many of these diseases, specially tuberculosis, leprosy and filariases were predominantly urban. However, the surveys showed that they are atleast as much prevalent in rural areas as in the urban. These diseases, which have been wiped out from large parts of the world continue to be highly prevalent in India.

Check Your Progress 1

Note: i) Space is given below for your answers
ii) Check your answers with the ones given at the end of this unit

1. Define malnutrition

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2. Mention two indicators normally used to assess health and nutrition.

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2. Nutritional Status

The nutritional status of a population is assessed during surveys of individual measurement of heights and weights (occasionally also mid-arm circumference and fatfold

over the arm) i.e. by anthropometry. Along with the anthropometry, physical examination is done to note clinical signs of specific nutritional deficiencies such as of Vitamin A, B-Complex, C, D, and minerals like Iron and Calcium. This information is supplemented by dietary surveys of different kinds. Both these data are provided on a regular basis for ten major States by the National Nutrition Monitoring Bureau (NNMB). The nutritional status of India's population, particularly the children is quite distressing. It has been estimated that India has the largest number of malnourished children below the age of five years in the world. The rate of malnourished children in India is 63 per cent. It has been estimated that even at birth, one in every three children born in India is of low birth weight: the result of undernourishment in the womb (UNICEF, 1995).

Table 5 : Nutritional Status of Children (1-5 years) by weight for Age * in Rural Areas of Ten Major States in India (1988-90)

Grade of * Malnutrition	Percentage
Normal (90% of standard)	9.9
Mild (75-90% of standard)	37.6
Moderate (60-74% of standard)	43.8
Severe (60% of standard)	8.7

* Based on NCHS standards, Gomez classification

Source : Report of repeat surveys - 1988-90, National Nutrition Monitoring Bureau.

This table reveals that only about 10% of the children of ages 1-5 years had normal weight for their age, i.e. 90% were malnourished.

Based on weight for age, it was found that while about 38% were in the category of mild malnutrition, 52% were moderately or severaly malnourished. These figures reveal the shocking state of nutrition among our rural population. In addition to the retardation of physical growth, the survey showed that nearly one-fifth of the pre-school children suffered from clinical malnutrition mainly showing symptoms of protein energy-malnutrition (PEM), Vitamin-A deficiency or Vitamin-B complex deficiency. Iron deficiency anemia, not checked for in the NNMB suveys, is one of the very important nutritional disorders in India. Iodine deficiency, goitre and fluorosis due to excess flourides in water are nutrient related conditions which are widely prevalent in some geographical regions. It has been estimated that lack of iodine in the diet accounts for 90,000 still births and neo-natal deaths every year. Let us learn some more about the most important of these nutritional disorders.

* Protein Energy Malnutrition (PEM)

The low weight for age found in 90% of children under 5 years indicates the deficiency of energy and proteins i.e. the inadequate consumption of staple food. As we will discuss later when we study the dietary pattern, it is the deficiency of calories which is more significant than protein deficiency in the context of rural India.

The severest manifestations of PEM are marasmus and kwashiorkar. Marasmus is a condition in which the child is very thin, only skin and bone with severe fat and muscle loss, and a wizened monkey like face with sunken cheeks but is mentally alert and has good appetite. The child with kwashiorkar has oedema on the legs and face with less loss of fat and muscles and a pot belly thus not appearing too thin. There is altered skin and hair colour and texture, dull mental functioning and a poor appetite.

The majority of PEM is the mild and moderate form. Children in these categories of malnutrition may appear to be normal and healthy at first sight because they may not be too thin. They are, however, generally short for their age and therefore also have low weight for age. Their state of malnutrition becomes obvious only upon knowing their age. Then, comparing their height and weight with the average of well-nourished children show up their state of under-nutrition.

These children with PEM are the ones who become prey to the vicious cycle of infection and malnutrition. Most of them become victims of the early childhood mortality. As they suffer from a general deficiency of food, they are the ones with high rates of other accompanying deficiencies such as Vitamin-A, B-complex and iron, etc.

In adults, the severest form is acute starvation but it is the chronic deficiency of food which is most common. One impact of this is seen in low weight mothers who experience a greater number of still-births and give birth to low birth weight babies. These babies have much higher chances of dying in infancy or early childhood. In India, as we have already seen, one third of babies are born with low birth weight (less than 2.5 kg.)

* **Iron-deficiency anemia**

Several studies carried out during the last 50 years have shown a high prevalence of nutritional anemia in India. While no all-India data is available, surveys in different regions have shown variable prevalence rates. Anemia aggravates other complications of pregnancy and child birth such as haemorrhages and infections. It is estimated to be directly or indirectly responsible for about 20% of maternal mortality. It is also a major cause of premature births and low-birth weight babies both of which lead to high infant mortality.

* **Vitamin-A Deficiency**

Deficiency of Vitamin-A is widely found in all parts of India. Its common manifestaions are changes in the eye - night blindness, conjuctional dryness and greyish foamy patches on the white of the eye (Bitots spots). Keratomalacia, which is a less common, in severe form is a medical emergency and if untreated results in blindness. It often occurs in association with moderate or severe PEM.

4.2.3 Dietary Intake in Rural India

Since status of nutrition is determined by food intake, let us discuss briefly the pattern of dietary intake in rural India. What is wrong with the diets of rural India that there is such widespread malnutrition ? What are the gaps in quantity and quality of food taken ?

The diet survey of the NNMB, 1988-90 shows that, on an average, consumption of cereals is adequate as per the recommended dietary intake (RDI). However for all other food stuffs, the dietary intake is short of RDI.

Table 6 : Average Consumption of Food Stuffs (g/cu/day)

Foodstuffs	Year	Pooled	RDI
Cereals and Millets	1975-79	504	460
	1988-90	490	
Pulses	1975-79	36	40
	1988-90	32	
Green Leafy Vegetables	1975-79	51	40
	1988-90	49	
Other Vegetables	1975-79	8	60
	1988-90	11	
Roots and tubers	1975-79	48	50
	1988-90	40	
Milk and Milk Products	1975-79	100	150
	1988-90	96	
Fats and Oils	1975-79	12	20
	1988-90	13	
Sugar and Jaggery	1975-79	23	30
	1988-90	29	

Table 6 brings out the fact that on an average protein intake is adequate but energy intake is somewhat below RDI. Iron is adequate but Vitamin A is far below RDI, and intake of Vitamin C and B-complex is near RDI. Are these nutrient deficiencies primarily because of deficiency of foodstuffs other than cereals ?

Calculation of protein and energy intake of the food stuffs consumed by each household shows that the picture is worse at household level than the aggregate data indicates. Only about half the households (53.33%) get adequate calories while 83.5% get adequate proteins (NNMB, 1990). Obviously the major deficiency is of energy.

Thus while, on an average, adequate cereals seem to be consumed by our rural population, the inadequacy of energy and protein in the diets of a significant percentage of households indicates the disparity in food intake across households i.e. some households would be consuming well above average while others would be way below it.

The significant deficiency of Vitamin-A in the aggregated diets indicates the inadequate intake of foodstuffs rich in this vitamin and the need for dietary correctives, both in quality and quantity.

The paradox of adequate aggregate iron intakes and high prevalence of iron deficiency anemia is explained by a combination of factors — the disparity in consumption across and within households, the combination of foodstuffs which may decrease absorption of iron and increased loss due to intestinal malfunctioning, repeated pregnancies and other diseases.

Thus, we have seen how the health and nutrition status of the Indian rural population is on the aggregate far from satisfactory. The mortality indices are much worse for the rural population as compared to the urban. High early childhood mortality shows that the status of children's health is the worst. Morbidity due to infectious diseases is very high. In addition, there is also morbidity and disability due to accidents, toxicity and cancer. Malnutrition exists in the majority of the population. The deficiency of staple food is the primary form of malnutrition. In addition, iron-deficiency anemia and Vitamin-A deficiency have a high prevalence.

Check Your Progress 2

Note : i) Space is given below for your answers.

ii) Compare your answers with the ones given at the end of this unit.

1. Tick (✓) the right answer from among those given in the parenthesis at the end of each question.

   i) Compared to other countries, the mortality indices for India are (high, medium, low)

   ii) The most common groups of diseases prevalent in India are (infectious diseases + malnutrition, cancers + malnutrition, cancers + heart diseases)

   iii) The percentage of children with a normal level of nutrition as measured by their weight for age is about (10%, 20%, 30%)

   iv) To improve nutritional status of children in rural India we must increase their intake of (staple food, protein-rich foods, iodine-rich foods)

2. Mention three factors to establish the linkages between health and nutrition.

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3. How does malnutrition contribute to mortality and morbidity ?

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4. What are the common nutritional disorders in rural India ?

5. What are the severest manifestations of PEM ?

Activity 1

Go through the OPD records of any government general medical institution, e.g. a PHC or a district hospital, and compute the percentage of patients diagnosed as suffering from malnutrition, infectious diseases and non-infectious diseases. You may need the help of a doctor in classifying all the conditions in these three categories.

4.3 TRENDS IN HEALTH AND NUTRITION STATUS

In the previous section, we have seen the present status of health and nutrition of the rural population. It is equally important to know the trends over time so as to visualize the likely direction of future changes.

4.3.1 Trends in Health Status

An accurate assessment of trends in health and nutrition status requires comparable data on the various indicators at different points of time. This is not available for all the indicators for the whole rural population. The most consistent data available over time is on mortality rates provided by the decennial censuses. It shows a very marked and steady decline from 1921 right upto the present time (Table 7). This shows a very significant improvement in one aspect of health status. The life expectancy at birth has correspondingly risen from 22.9 years in the first decade of this century to an estimated 57.9 in 1990 (Table 7), *i.e.* more than doubling of average life span of an Indian over nine decades.

Table 7 : Death Rates and Expectation of Life at Birth (Census Estimates)

Decade	Death Rate per 1000 population	Expectation of life at Birth (in Years)
1901-11	42.6	22.9
1911-21	47.2	20.0
1921-31	36.3	26.8
1931-41	31.2	31.8
1941-51	27.4	32.1
1951-61	22.8	42.3
1961-71	19.0	45.6
1971-81	15.0	50.5*
1991 +	11.0	57.9

*Based on Sample Registration System

Source : Registrar General, India

Changes in overall morbidity are difficult to gauge because, even if similar surveys are repeated, changes in perception of illness of the population would lead to data which would not be objectively comparable. However, changes in prevalence of specific diseases can be known. The eradication of small-pox is a significant development. The incidence of malaria declined dramatically in the late 50s but later rose again though not to the same level as in 1950. Kala-azar had come to very low levels but has again risen sharply in some districts of Bihar and West Bengal. Cholera had diminished markedly. However, over the last few years small epidemics have begun to resurface in different parts of the country. Gastro-enteritis and dysentry has a high endemicity in most parts and outbreaks with deaths are being increasingly reported. Tuberculosis continues to be prevalent at the same rate as in 1957.

At the same time diseases such as cancers, allergic disorders, toxicities and accidents are on the rise. The new infectious disease of Acquired Immuno Deficiency Syndrome (AIDS) is spreading even into rural areas.

What is the sum total of these changes ? The pattern of diseases continues to be dominated by infectious diseases though non-infectious diseases are on the rise.

Table 8 : Average Annual Deaths in British India (excluding Burma) 1932-1941

Disease	Average annual deaths	Percentage
1. Fever (including malaria)	36,22,869	58.4
2. Respiratory diseases including tuberculosis	4,71,802	7.6
3. Dysentery and diarrhoea	2,61,924	4.2
4. Cholera	1,44,924	2.4
5. Small pox	69,474	1.1
6. Plague	30,932	0.5
7. Other Causes	15,99,490	25.8
Total	62,01,415	100.0

Comparing this with Table 2 one can see how similar they are. The difference is that fevers have come down and respiratory diseases gained in importance as causes of death. It is also to be noted that small-pox, plague and cholera - the diseases which have declined markedly since then - are the diseases with high fatality rate but they constitued only 4% of the mortality even at that time.

4.3.2 Trends in Nutritional Status

At the time of Independence, the country suffered from constant chronic food shortages accompanied by periods of famine and severe shortfalls in meeting food needs of the population. Though adequate data is not available at the all-India level, the extremely poor nutritional status of large proportion of the rural population is well documented.

While the acute starvation in famine situations have diminished markedly since then, the state of chronic under-nutrition continues to persist on a significant scale, as we have seen earlier in this Unit. In order to analyse time trends, we have data provided by the NNMB only since 1972. For the period before that some studies are available from the ICMR, Nutrition cells of state governments etc. From comparative studies covering the periods 1956-57 and 1974-79, scholars conclude that there was practically no difference whatever in the growth status of poor children who continue to exhibit the same order of growth retardation.

The NNMB conducted a survey in 1988-90 covering the same districts and set of villages as it had covered in 1975-79 using the same methodology. It shows a very marginal improvement in the average heights and weights at the fittest age when adult growth has been achieved - 25-29 years. This can be seen from the following table.

Table 9 : Average Heights and Weights of Rural Men and Women Aged 25-29 years (for periods 1975-79 and 1988-90)

		1975-79	1988-90
Male	Height	163.1 cm	163.5 cm
	Weight	49.5 kg	50.3 kg
Female	Height	150.8 cm	152.2 cm
	Weight	42.5 kg	43.1 kg

Source : Report of Repeat Surveys 1988-90, NNMB

According to another survey by NNMB the percentage of normally nourished children in 1974-79 was 5.9 and it was 9.9 in 1989-90.

Available data also reveal that the severe forms of Vitamin A deficiency have declined. However, the percentage of children with signs of B-Complex deficiency and of anemia remain the same as before.

Thus, though there has been some improvements in nutritional status, it has been very marginal. Why has there been such little improvement in nutritional status ? Comparing 1975-79 NNMB data with that collected by the Nutrition Cells of different states in 1955-56 shows some increase in average per capita consumption of calories. This is given in Table 10.

Table 10 : Calorie Consumption Per Consumption-Unit During Different Periods

Period	Calorie Consumption (K.Cal/cu/day)
1955–56	2070
1975-79	2340
1988-90	2283

Source: Report of Repeat Survey 1988-90, NNMB

However, the NNMB repeat survey found that "at the aggregate level, there has been little change in the average calorie intakes of rural households during the last 15 years". It was also found that, inspite of no change in overall intakes at the household level from 1975 to 1990, an increase in energy intake of pre-school children (1-5 years) had occured.

There has been a decline in consumption of cereals, pulses and milk products, the latter two already being below RDI. (See Table 6). The intake of green leafy vegetables, fats and oils and sugar and jaggery has increased but not yet come up to the RDI in any case. Does this increase in intake of these, generally more expensive food stuffs, compensate for the decline in cereal intakes ? We will be dealing with this question a little later.

Looking at all these changes over time, we cannot talk of significant improvements in all indices of health and nutrition status in rural India. While major improvements have occured in mortality rate we find that there has been little improvement in the conditions pertaining to disease prevalence and only a marginal improvement in nutrition.

Check Your Progress 3

Note : i) Space is given below for your answers.
ii) Compare your answers with the ones given at the end of this unit.

1. Fill in the blanks :-

   i) The death rate (per 1000 population) in India has declined from ..... in 1941-51 to ..... in 1971-81.

   ii) The first three causes of death in 1932 - 41 were ....., ... and ..... .

   iii) The percentage of normally nourished children in rural India was found by the NNMB survey to be ..... in 1974-79 and .... in 1989-90.

2. Summarise the changes in health status of the rural population from 1950 to 1990.

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Activity 2

Talk to a well-informed elderly man from a village, to an elderly lady and to an elderly doctor or other health worker. Ask them about the changes they think have occured around them in child mortality, nature of diseases, physical health, etc.

Activity 3

Recreate in your mind the social and economic structure of an average Indian village, prefereably your own village. Then try to imagine the sections of the village in which ;

i) cereal consumption is likely to have declined.

ii) consumption of pulses and milk products is likely to have declined.

iii) consumption of fats and oils, sugar and jaggery is likely to have increased.

This exercise will help you read the pages that follow.

4.3.3 Differentials within the Rural Population

Having learnt the trends in health and nutrition status, let us see the differentials within the rural population.

The rural situation, as depicted above, is an aggregate of the health and nutrition status of the rural population at the all-India level. It hides wide differentials across different regions, sections and groups within it. Let us now break up the aggregates and look at some of these differences.

1. Regional Differences

State-wise data on various health indicators give an idea of the differentials in health status among the rural population in different parts of the country.

As Tables 11 shows, the states can be categorised on the basis of mortality indices. Kerala is far ahead of all other states with lowest CDR, IMR and high Life expectancy. Maharashtra and Punjab form the second best group. Karnataka, Tamil Nadu, Andhra Pradesh, West Bengal, Haryana and Gujarat fall into the third group while the worst mortality indices are for the States of Assam, Rajasthan, Bihar, Uttar Pradesh, Madhya Pradesh and Orissa.

Table 11 : Inter State variations in key Health Indicators

*Rank	State	Death Rate (1990)	IMR (1990)	Expectation of life at Birth (years)	
				Female	Male
1.	Kerala	5.9	17	75.00	68.60
2.	Punjab	7.3	55	66.55	66.61
3.	Maharashtra	7.8	58	65.90	64.00
4.	West Bengal	8.1	63	61.94	61.95
5.	Tamil Nadu	8.1	67	63.05	62.35
6.	Haryana	8.5	69	64.22	65.21
7.	Andhra Pradesh	8.7	70	64.48	61.40
8.	Karnataka	8.7	71	65.30	64.15
9.	Gujarat	8.9	72	62.74	60.94
10.	Bihar	9.4	75	60.09	60.81
11.	Assam	9.7	77	58.48	58.74
12.	Rajasthan	10.6	83	61.34	60.50
13.	Uttar Pradesh	11.6	98	52.84	57.14
14.	Madhya Pradesh	12.0	111	57.96	59.24
15.	Orissa	12.5	123	58.40	60.13

* Ranking has been done only for Death Rate and IMR.

Source : Based on projection worked out by expert committee.

2. Socio-Economic Differentials

Only a few studies have attempted to correlate socio- economic status and health in India. Among these, some have used caste as the category for comparison, while others have used occupation, income or a grouping based on a number of characteristics like income, land-ownership, housing, source of lighting, educational level etc. A study conducted in Narangwal, Punjab for 1968-73 by a multi-institutional team of researchers found that the heights and weights of pre-school children were significantly correlated with their caste status.

The survey on Infant and Child Mortality conducted by the Registrar General's Office in 1979 showed that infant and child mortality was higher among the scheduled castes and tribes than the total population.

The table 12 tends to reveal the association between income and nutrition status.

Table 12 : Association between Income and Malnutrition

	% of Children 1-5 years Moderately & Severely Malnourished (1988-1990)	Rank	Per Capita Net State Domestic Product (At Current Prices)	Rank	% of Children 6-9 Months Receiving Breast-Milk and Solid/Soft Foods (1992-93)	Rank
Kerala	35	1	4,207	6	69	1
Tamil Nadu	50	2	5,047	3	57	2
Andhra Pradesh	52	3	4,728	4	48	3
Madhya Pradesh	55	4	4,149	7	28	6
Maharashtra	55	5	7,316	1	25	7
Karnataka	57	6	4,696	5	38	4
Orissa	57	7	3,077	8	30	5
Gujarat	59	8	5,687	2	23	8

Source : The Progress of Indian States, UNICEF, 1995.

However, economic status clearly influences dietary conumption. The following table shows the increase in intakes with increasing per capita income.

Table 13 :Protein and Energy intakes by Per Capita Income during 1988-90

Percapita Income (Rs./month)	N	Protein (g)	Energy (Kcal)
< 30	143	53.3	2026
30 – 45	372	56.5	2172
45 – 60	550	55.8	2131
60 – 90	1137	55.6	2130
90 – 150	1424	59.4	2213
150 – 300	1056	60.8	2254
> 300	501	70.3	2595

Source : Report of Repeat Surveys, 1988-90, NNMB.

3. Gender Differentials

The poorer health status of females in rural India is a well-accepted fact. The sex ratio of 929 females per 1000 males shows this very clearly, even more so when we find that the reverse is the case in most other parts of the world i.e. in any population there are more females than males. In India, Kerala is the only state with a sex ratio favourable to females. Death rates of females are higher than that of males from infancy right upto 35 years of age. (Then it reverses suddenly to higher dealth rates among males)

Maternal mortality (deaths related to pregnancy and childbirth) is very high, between 4 and 5 per 1000 live births. Yet it accounts for very little proportion of total female mortality. It can obviously not be the cause for higher death rates among 0 - 4 year old female children. It accounts for only 2.5% of all mortality in females and about 10% of mortality in women of reproductive age group. Infectious diseases are the major killers of females even in this age group. High levels of malnutrition contribute to both these, anemia being a major factor in the high maternal mortality.

Check Your Progress 4

Note : i) Space is given below for your answers.
ii) Compare your answers with the ones given at the end of this unit.

1. Briefly examine the differentials which influence health and nutrition status.

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4.4 FACTORS INFLUENCING HEALTH AND NUTRITION STATUS IN RURAL INDIA

The data we have studied in the previous section itself suggests the factors affecting health and nutrition status in rural India. We can see that survival mechanisms have improved in some way apart from social, economic and political factors. The decline of some major diseases and the decrease in severe outcomes of many others show the impact of biological changes as well. This may be due to natural biological phenomena (eg. change in virulence of germs or increase in immunity of the human population) or due to medical care and public health interventions such as the mass programmes against small pox and malaria.

Thus the broad factors considered to be influencing health and nutrition status are :

- Nature of social and economic development
- Socio-economic status of poor households

- Socio-cultural factors
- Population growth

4.4.1 Nature of Development

As we have discussed in Unit 2 of this Block, development has many facets and health is closely linked to development. Among the many factors influencing health, access to public health and modern medicine, socio-economic development and the natural biological changes are considered crucial. The interplay of these factors influences different aspects of health.

If we analyse the changes in mortality rates that have occured over the last eight decades we find that increasing access to public health and modern medicine is the primary reason for such changes. But it is easily seen that this can, at best, only be a very minor factor because in the pre-Independence period access to public health and modern medical care was limited to a very small fraction of the population. Medical technology was able to show a positive impact on mortality rates only after basic needs of nutrition, housing amenities, environmental sanitation etc. had been met. Similarly, scholars studying economic history and historical demography are examining the possible reasons for this decline but no explanation is yet widely accepted.

The role of natural biological changes has also been used to explain the increase and decline of disease in the natural cycle of any epidemic and the cyclical nature of occurance of epidemics in any population as evidence of natural change processes. Both the disease organism and the human host 'adapt' to each other over time by changes in virulence of the organism and immunity of the host.

While examining the rate of development it is just as crucial to consider the nature of socio-economic development as it is to consider its quantum. If the development is suited to the conditions of small percentage of the population, it will show limited impact on the health indicators at the aggregate level.

One paradox which highlights the importance of nature of development is that while our production of foodgrain has gone up per head of population there has been little improvement in dietary intakes and in nutritional status of the rural population. While food grain availability increased from 424 gm per capita per day in 1976 to 475 gm in 1990, calorie consumption itself has remained about the same during this period or has declined. The expectation that public distribution would ensure access to the produce in all parts of the country has not materialized, specially in rural areas. So the rural population living in less fertile and poorly irrigated regions (which was the most malnourished) did not get much benefit from extra production. Many subsistence producers were converted into buyers of food.

The access of the poorer rural families to market purchase remained low because real wages did not increase and rural employment did not increase either. The shift in diets from the cheaper coarse cereals to the more expensive wheat and rice also meant that each calorie costed more. All this together led to a situation where we had buffer-stocks of grain but 90% of children below five continued to be malnourished and calorie consumption of our rural population did not increase.

One can identify several reasons for the poor quality of living in rural areas. These are :

1) inadequate purchasing power,
2) maldistribution of resources and services,
3) inadequate infrastructure and services,
4) population growth which further cuts into the inadequate infrastructure and services,
5) poor use of infrastructure and services,
6) negative attitudes of service providers,
7) unhygienic habits, unhealthy diets and other behaviour promoting ill-health.

It is evident that a wider range of factors influence health and nutrition status and the inter-relationships between these factors are complex. An examination of these factors can be done at various levels — at the narrowest biological level, at the broader level of environment and people's behaviour and at the even broader level of social, economic and

infrastructural conditions which largely influence the nature of environment and people's behaviour and choices. The prevailing health and nutrition status is the outcome of all these together. Which of these factors plays a greater or lesser role in determining health and nutrition status would vary from situation to situation. Any effort to improve the health and nutrition status of India's rural population has to be directed at all these levels.

4.4.2 Socio-economic Status of Poor Households

In India, because of poverty, the purchasing power is so low that the basics for survival are difficult to obtain. Deficiency of food intake is the clearest manifestation of this. It also means poorer housing, little access to amenities (which makes every day life difficult) such as a water-source in the home, fuel which can be bought and stored, electicity etc.. This leaves no extra money for special situations such as illness.

Therefore, poverty implies being engaged in difficult daily chores specially by the women, which leave little time and energy for anything beyond immediate tasks of survival. It means less time for child care. Lack of amenities, poor housing, coupled with the little time and energy available to the woman leads to poor hygiene care as well.

Such a situation where, because of her economic insecurity, a woman has little choice or bargaining power, deprives the home, and specially children of essential care for health. Inability to breast feed the child adequately is another problem which is important from the nutritional and health angle.

Poverty means economic uncertainity and insecurity. It means being constantly engaged in balancing between options so as to ensure survival and make optimal use of what one has. In a situation of insecurity about obtaining basics for survival, the choice naturally tends to fall on the option which provides support for the present struggle for survival, hence long-term considerations becoming secondary. The services are provided without concern for this dilemma of the poor. They are designed in such a way as to make the two options mutually exclusive. A system of schooling which would allow the child to get educated even while earning would provide some solution to both long and short-term goals. The quality of services provided and the attitude of the service providers are also important factors.

Going back to the factors influencing health and nutrition (discussed earlier) we see that while the inner core of biological factors are the same, in the case of the poor, encounter with infectious diseases and under nutrition would be more than that of the better-off sections. However, not only the quantum of such diseases but the factors causing them would vary in importance. Lack of purchasing power is the obvious primary factor in determining health status of the poor. Let us examine the role played by other factors in the given situation.

The childhood malnutrition among the poor is largely a result of inadequate purchasing power, the inability of the labouring mother to breast feed the child adequately and her inability to prepare special food appropriate for the infant and feed it sufficient number of times in a day. This leads to an inadequacy in quantity of food intake. As you have read in the previous section, it is the quantity of food that is lacking in malnourished children in India, not the quality of diets. If they consumed enough food to get adequate calories, their protein requirements would be met while Vitamin A and iron deficiencies will decrease but may still remain. Many studies also show that the "diet used is about the best that could be done with the money available". Thus ignorance of the mothers about child malnutrition is not the major factor causing the child's malnutrition. Changing the mother's practices and behaviour in this regard by nutrition education, (because the constraint of her situation do not allow much opportunity for improvement) is a meaningless step unless the conditions constraining the mother's ability to feed the child adequately are not removed. At best it might improve specific deficiencies such as Vitamin A, but the deficiency of calories will remain untouched.

Delayed supplementary feedings (i.e. feeds in addition to breast milk) was earlier thought to be a major reason for infant malnutrition. It was advocated that it should start at 3 months of age. But the village mother knew better. They knew from experience the danger of diarrhoea increases manifold with supplementary feeding when they are unable to boil the feeding bottle or cook the food fresh everytime or store the cooked food hygienically for long. The diarrhoea can mean more malnutrition and even death. Now paediatricians too have realized this and advocate supplementary feeding to poor mothers only by six to nine months. On the other

hand for malnutrition among the better-off, be it obesity (over-nutrition) or deficiency of nutritients, unhealthy behaviour is probably a much more important causative factor because the constraining factors discussed above are not there.

4.4.3 Socio-cultural Factors

Often the poor are blamed for not availing the health care facilities as they are considered illiterate and superstitious. However it is clear from numerous studies that they do avail of modern medical care whenever it is possible to do so. The constraining factors are :-

- Inability to meet the cost of transport charges to be paid to doctors or other workers, diagnostic tests and drugs and inability to suffer the loss of wages and work, i.e. inadequacy of purchasing power and of services close to home.
- Ineffectiveness of modern medicine in curing some disease e.g. chronic conditions such as arthritis, stroke etc. or acute ones such as hepatitis (infectious jaundice).
- The apparent ineffectiveness of the modern system because of the poor quantity of services available to them, e.g. the inability of medicine to intervene effectively in the malnutrition-diarrhoea cycle without the services for nutrition rehabilitation.
- The distrust of government health personnel and institutions because of their emphasis on family planning, their rude behaviour and their negligent attitude.

With this set of conditions, the choice of whether to try folk medicine or the modern system, whether to go to a government or private institution is a matter of pragmatic balance between economic costs / or effectiveness of various systems and the nature of attention given by the medical practitioner.

4.4.4 Population Growth

Population growth as a factor for poor health and nutrition status too needs to be examined from the perspective of the poor.

It seems very logical that more the number of family members, more will be the requirement of food and all other needs and therefore greater will be their deficiency. Thus the large number of children (i.e. more than the officially prescribed ideal) of the rural poor are a major cause of their malnutrition and ill-health. However, this logic seems to apply differently in the rural situation. The land-owning families may need more hands on the land so more children are economic asset. For the labouring poor the children are even more valuable because they supplement income since very young—a significant input into a very insecure economic situation. They thus add much more and take out much less from the domestic budget. More children are considered desirable by the rural people. In addition, the high child mortality means that more children must be born for achieving the desired family size. That they do practise family planning according to their own logic is evident by the fact that the total number of children born to rural families is much below their biological capacity though more than the 'one or two' norm advocated officially. Birth intervals too are longer than can be explained biologically.

This section has shown you the links between biological, social, developmental, economic and cultural factors of health and nutrition status. It is the complex interaction of all these aspects over time which has resulted in the current status. The specificity of these factors and their relative role in building the health status will vary from one population to another and from one section within a population to another.

Taking poverty as one of the major phenomena shaping our rural scenario, we have examined some of the specific phenomena which go into the making of their low health status. We find that the constraints of their situation are more responsible than their knowledge and behaviour. The latter is, infact, shaped by their constrained situation and often is conducive to optimal use of the limited resources they have.

Check Your Progress - 5

Note : i) Space is given below for your answers.

ii) Compare your answers with the ones given at the end of this unit.

1. What are the factors causing a high prevalence of infectious diseases in rural India ?

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2. What are the factors causing high levels of malnutrition ?

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4.5 LET US SUM UP

We have discussed the health and nutrition status in rural India. In the first section we have seen the overall picture of health and nutrition. In the second section we have seen the trends in the status of health and nutrition. We have discussed the factors influencing health and nutrition status in rural India in the third section. Perhaps the following matrix may help you to recall and remember the salient points you have learnt in each section.

Health and Nutrition Status: An Overview	Trends in Health and Nutrition Status	Factors Influencing Health and Nutrition Status
• Health and nutrition are closely interlinked	• Death rate has decreased and the expectation of life at birth has increased	• The nature of development process itself influences the status of health and nutrition. The nature of development includes natural biological changes, access to public health and modern medicine and the economic growth leading to meeting the basic needs of the rural poor.
• Mortality and morbidity are the two inportant indicators used to assess the status of health.	• The pattern of diseases continues to be dominated by infectious diseases though non-infectious diseases are on the rise.	• However, the purchasing power of the poor is the most crucial factor influencing their health and nutrition.
• India has a high mortality rate and within India, the mortality rate in rural areas is higher than the urban areas.	• Improvement in the average heights and weights at the fittest age is very marginal	• Economic status has a deep impact on the status of health and nutrition. Poverty of the rural people is the main cause of their low health and nutrition status.
• The infectious diseases and malnutrition together contribute over 70% of the diseases leading to deaths in rural India.	• At the aggregate level there has been little change in the average calorie intake of rural households during the last 15 years.	• Cultural practices do influence health and nutrition. But the rural poor are unable to have access to the existing health care services due to other coustraints which can be overcome mostly by the state.

• Though there is a shift in the disease pattern, the infectious diseases and malnutrition continue to be the major causes of morbidity in rural India.	• There are marked regional, socio-economic and gender differences in the trends in health and nutrition status	• Increased population growth will continue to negatively affect the health and nutrition status of the rural poor as long as the survival of their children and meeting their basic needs are not guaranteed.
• India has the largest number of malnourished children below the age of five years in the world.	• There is a positive correlation between per capita income and nutrition status	
• 90% of the children of ages 1-5 years are malnourished.	• Morbidity and mortality is high for female (at least upto 35 years of age) than male population.	
• The deficiency of staple food is the primary form of malnutrition.		

4.6 KEY WORDS

1. Anthropometery : The science of measurement of various organs of human body.
2. Haemorrhage : Severe bleeding
3. Gender : A term used to explain the culturally determined social relations between men and women
4. Oedema : Swelling of body / body parts
5. Senility : Aged or weakness on account of old age.

4.7 SUGGESTED READINGS

Government of India, *Annual Report, 1994-95, Ministry of Health and Family Welfare,* New Delhi.

Park, K, 1994. *Park's Text Book of Preventive and Social Medicine,* Banarasidas Bhanot Publishers: Jahalpur.

UNICEF, 1995. *The Progress of Indian States,* UNICEF: New Delhi.

4.8 MODEL ANSWERS

Check Your Progress 1

1. Malnutrition means imperfect nourishment which occurs when the demands of the body for certain nutrients are not met (under nutrition) or are met in excess (over nutrition).

2. The two indicators used to assess health status are (i) mortality and (ii) morbidity. Measurements of heights and weights and food consumption pattern are the two indicators used for assessing nutritional status.

Check Your Progress 2

1. i) Compared to other countries the mortality indices of India are medium.

   ii) The most common groups of diseases prevalent in India are infectious diseases and malnutrition.

iii) The percentage of children with a normal level of nutrition as measured by their weight for age is 10.

iv) To improve nutritional status of children in rural India we must increase their intake of staple food.

2. The following three factors can be used to establish the linkages between health and nutrition
   i) Food intake which determines the nutritional status
   ii) Burden of disease which affects food intake
   iii) Malnourishment leading to prolonged illness, disability and death.

3. Malnutrition contributes to mortality and morbidity as the malnourished person is easily prone to infection and has lower ability to fight disease producing organisms.

4. The common nutritional disorders in rural India are vitamin-A, B-complex, C, D, and minerals like iron and calcium.

5. The severest manifestations of PFM are marasmus and kwashiorkar.

Check Your Progress 3

1. i) The death rate (per 1000 population) in India has declined from 27.4 in 1941-51 to 15.0 in 1971-81.

   ii) The first three causes of death in 1932-41 were fever (including malaria), respiratory diseases (including TB), and dysentary and diarrhoea.

   iii) The percentage of normally nourished children in rural India was found by the NNMB survey to be 5.9 in 1974-79 and 9.9 in 1989-90.

2. During the period 1950 to 1990, mortality rates have declined markedly in the rural population. Morbidity and malnutrition persist at the same rate but in less severe form. Thus it seems that many more survive and live longer than before but their physical state is as poor as in the past.

Check Your Progress 4

1. The differentials which influence the health and nutrition status are (i) rural-urban divide, (ii) poverty gap and (iii) gender. Those who live in urban areas have greater access to health care services. The poor do not have the purchasing power and their nutritional (malnourished) status forces them to be easy victims of disease. The mortality and morbidity rate among the female is higher than male population upto 35 years of age.

Check Your Progress 5

1. The factors causing a high prevalence of infectious diseases in India are :
   i) Insanitary environmental conditions with low availability of safe water supply and poor disposal of human wastes.

   ii) Low nutritional status.

   iii) Poor access to effective treatment of illness

   iv) Poor economic, infrastructural and social conditions leading to unhygienic behaviour of people.

2. The factors causing high levels of malnutrition are :
   i) A high percentage of households with very low purchasing power.

   ii) Maldistribution of the benefits of agricultural development across regions and socio-economic groups.

   iii) A greater deficiency of food consumption among females and young children due to maldistribution within the household.

UNIT 5 DIFFERENT MODELS OF HEALTH CARE DELIVERY: AN OUTLINE

Contents

5.0 AIMS AND OBJECTIVES

This unit aims at making you aware of selected models of health care delivery and familiarising you with the strengths and drawbacks of each of them. In addition, the impact of world recession on health services development and its effect on India is also discussed.

After going through this unit, you will be able to :

- trace the evolution of health insurance schemes in Western Europe
- describe the British, American and Canadian model of health services delivery
- state the impact of world recession and shift from the welfare approach to privatisation
- assess the impact of these models on the Indian situation.

5.1 INTRODUCTION

The provision of medical care varies across countries and the nature of services is determined by the socio-economic and political forces in a given society. There is great variety in patterns of provision of heathcare, however, broadly speaking there are three main types: Firstly, there are countries where the State plays a central role in the finance, provision and administration of services but at the same time private interests in the form of individual practice, hospitals, insurance and other supportive services also co-exist. Secondly, there are countries where the state is the sole provider and private interests are not allowed. Thirdly, there are countries where a national health insurance scheme covers all its citizens but there is plurality in the provision of services.

Against this backdrop, we shall first discuss these models drawing reference to some of the countries which have adopted them. The countries which we are going to refer are Britain, Canada, United States of America and Cuba. As you may see in this unit, the contentious issue which makes these models different from our country is the role of the State and market. Therefore, an attempt is made to highlight some of the issues raised in this debate. In the final part of this unit, we shall try to understand the implications of these models for Indian health services.

5.2 DIFFERENT MODELS OF HEALTH CARE DELIVERY : CROSS COUNTRY EXPERIENCES

Before we attempt to discuss the cross country experiences, let us first have an overview of the different models.

5.2.1 An Overview

Barring a few countries like Cuba where the State is the sole provider of medical care, most of the developed and developing world have a mixed provision of medical services. While in the United Kingdom and India, the State has played a dominant role in the finance, provision and administration of services; in several western European countries, the State has financed medical care through publicly funded insurance schemes but services are largely provided through quasi-government, private and voluntary bodies. The Canadian system is slightly different from these in that health services are provided through a public insurance system which is universal in coverage thereby ensuring equal access to all its citizens. The economic burden of this system is shared, through the general tax system, according to the financial capacity of its cilizens. Although the provisions of services are done through private agencies, there is a ceiling on the charges because all citizens are covered by the public insurance scheme. Infact, the United States is the only country that has relied predominantly on private insurance schemes which means that only people who can afford to pay get access to medical care. Although there have been efforts to evolve a comprehensive health insurance scheme, the professional bodies and private insurance schemes have effectively prevented it. In 1960, public insurance was limited in its coverage for certain vulnerable sections of the population, namely, the elderly and the poor. The scheme for the elderly was known as Medicare and for the poor it was called Medicaid. If one were to review the health care delivery systems of United States, Britain, Canada and Cuba, one can broadly summarise these as given in the table below :

Table 1 : Financing of different health care delivery systems

Country	Sources of Finance and Delivery
United States	Mainly private insurance schemes. Public Insurance only for elderly and poor. Health services provided mainly through private institutions.
United Kingdom	State supported National Health Services which is free for all citizens. Private insurance has limited coverage and share of private hospitals is small.
Canada	Public Insurance Scheme which ensures universal coverage to all its citizens. Hospitals are managed privately but cost is controlled by the State.
Cuba	Fully State financed and administered health services.

Check Your Progress 1

Note : 1) Write your answers in the space provided.

2) Check your answers with the model answers given at the end of the Unit.

1. What are the salient features of the British, Canadian and American models of health services delivery ?

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2. Fill in the blanks in the following statements:

i) In the United States there is a public insurance scheme for the elderly which is known as ..... and another scheme for the poor is known as ..... .

ii) In Canada the system of financing health services is through a ..... Insurance system.

iii) Cuba being a socialist country, the entire financing and administration of services is the sole responsibility of the .....

One of the key factors which makes the health care delivery of other countries different from India is the concept of social insurance scheme. Therefore, it is useful at this stage to know something about it.

Rise of Social Insurance Schemes

State intervention in the provision of medical care can be traced to the insurance schemes introduced by Bismarck in Germany in 1883. Following the German legislation of 1883, several European countries like Austria, Norway and the U.K. introduced health insurance in their respective countries. In most of the western European countries health insurance funds are operated mainly in the private sector. UK under Lloyd George also followed an insurance scheme which was very narrow since it provided protection against sickness to only a small section of the working population. It is only after the rise of the welfare state during the post-war period that a number of legislations were introduced. These measures sought to provide a variety of social security inputs like health, education, housing and pension schemes covering the entire population under the domain of public responsibility.

5.2.2 The British Model of Health Care Provision

Two distinct features characterise the British model of health care provision. They are (i) health care services as an essential condition for the survival of capitalism and (ii) the National Health Service (NHS) based on curative model. Based on the economic precepts of Keynes and the complimentary social policies recommended by Beveridge, the emphasis was on the need to regulate capitalism through State intervention. Increased State intervention in the economy and social spheres came to be seen as crucial in order to avert the collapse of capitalism which was facing a period of recession. As far as provisions of social services are concerned, Beveridge believed that it was necessary to purge capitalism of all its inefficiencies and injustices. It is in this context that both Keynes and Beveridge believed that capitalism and planning were compatible, and State intervention was essential to make it morally acceptable. Their concern for a wider state involvement in welfare was not simply humanitarian because according to them, "some welfare expenditure, viz. on health and education should be regarded as a communal expenditure, likely to bring a good return". Thus one sees that post-war growth of the welfare state was an outcome of a capitalist crisis and the ultimate purpose of this philosophy was to preserve the capitalist order by purging it of all its inefficiencies. They did not view the welfare state as a socialist state but saw it as a necessity for the survival of capitalism.

1. Earlier Schemes

Prior to the launching of the National Health Service, medical care was provided through varied sources that included voluntary organisations, local authorities, small private nursing services which were concentrated in urban, affluent regions of the country. It reduced accessibility to a large section of the population both socially and geographically. Given the type of services available, money played an important role in the use of these facilities. The poor usually received free treatment in voluntary and public hospitals. Schemes for the organised working classes were providing medical care through Friendly Societies and clubs and the rich paid for such services. However, middle classes found themselves at a loss and they put considerable pressure on the government to re-organize the health services after the war. When the idea of a national health service was conceived there was broad agreement across the political spectrum for the creation of comprehensive health care to be provided free of cost to all its citizens.

2. Organisation of the National Health Service

The organisation of the National Health Services (NHS) has clearly been dominated by the 'curative' model rather than an integrative approach of curative, preventive and promotive aspects. The NHS was organised on a tripartite system consisting of the hospital sector, the executive council sector and the local health authorities. The hospital sector consisted of the General Practitioners, Dentists and Pharmacists who were responsible for primary health care. The third part consisting of the local health authorities. It was largely responsible for environmental health and had a host of personnel for preventive and promotive care. In terms of powers and resources, the hospital sector got the major share, followed by the executive council sector which provided primary medical care. The local health authorities were left with the least share

of resources and power. It meant that preventive services were marginalised and the services provided by the NHS were therefore to be curative and hospital based.

5.2.3 Health Care Provision in Canada

The Canadian model of health care is based on a scheme called Canadian Universal Health Insurance Scheme; a brief summary of which is given below:

1. The Canadian Universal Health Insurance Scheme

The Canadian Universal Health Insurance Scheme was introduced during the sixties with the objective to provide "Comprehensive, Universal Health Services" programme for the Canadian people based upon freedom of choice, and upon free and self-governing professions; and financed through pre-payment arrangements".

The basic idea behind the insurance system was to ensure equal access to health care. It was established with Federal Grants-in-Aid which met about forty percent of the cost, the remaining amount was mobilised from the local provinces. Therefore, the Canadian funding system is not a national but a federal-provincial system, run co-operatively by the federal and provincial governments. The federal government has laid down certain broad guidelines for universal access, comprehensiveness of benefit, public administration of services and portability between provinces. The public insurance programmes are actually operated by each of the provincial governments, which have full administrative, fiscal authority and responsibility. The delivery of hospital services is mainly in the hands of the private sector.

Most hospitals in Canada are privately owned. 125,000 beds out of 175,000 beds are either owned or operated by private organizations. Majority of the doctors are in private practice. As mentioned earlier, the State has played a central role in controlling the private sector, both in terms of quality and costs. The areas in which the State has effectively intervened have been :

1. Public regulation of hospitals and doctors.
2. Public planning for supply and distribution of health resources.
3. Universal State controlled reimbursement methods emphasizing prevention and encouraging adequate but not excessive diagnostic and surgical procedures.

The major positive feature of the Canadian system is that as a result of universal health insurance, there is equal access to all its citizens irrespective of whether they are rich or poor. Secondly, the Canadian system has to a large extent been able to contain rising costs, which have increasingly become a problem in other developed countries. It is however interesting to note that the emphasis is really on hospital care rather than on preventive and promotive health. There has been a consorted effort to keep check on the overuse of diagnostic equipment through State regulations.

5.2.4 Health Care Provision in the United States

In the United States there has been no efforts to either provide for a nationalised health services as in UK nor a national health insurance scheme for universal coverage and equal access to health services for all its citizens. The US, historically has depended on private insurance schemes and bulk of health care provision has been through private and voluntary bodies. Although there has been a great deal of debate about introducing a universal health insurance scheme specially during the sixties, the fall out was a piecemeal approach to provide public schemes for the elderly and the poor, without instituting mechanisms for controlling costs of medical care. The introduction of Medicare and Medicaid infact resulted in increase in number of private hospitals as well as their profits. This was because both these schemes helped to provide a number of clients who had otherwise not been subscribers to private insurance schemes. Given the fairly large numbers involved, the private sector stood to benefit from these schemes.

While in the sixties there had been the introduction of public insurance schemes like Medicare and Medicaid, the seventies were marked by economic recession which resulted in a cutback on public spending. Until the late sixties and early seventies, the private sector was dominated by individual practitioner entrepreneurs and small scale provider organisations. Large capital was prominent in supportive inputs like pharmaceutical,

medical equipment and supplies but never a major factor in the delivery of services. With the introduction of public insurance programmes for the elderly and the poor in the sixties, there was additional demand for services. In order to meet this demand the federal government offered grants and tax subsidies for the construction of hospitals to the private sector. As a result of these policies, the public insurance schemes for the elderly and the poor turned public funds into subsidies to the privately controlled market.

The boom in the health care industry was shortlived since the seventies were marked by a recession across the industrialised world due to hike in oil prices, declining economic growth, increasing government budget deficits, spiraling inflation and rising unemployment. This had its effect on health care as well, resulting in cutbacks on public expenditure and the government prescribing limits on charges by private hospitals. With the Reagan administration coming to power during the eighties there were further cuts in the health budget which directly affected the poor. Eligibility for Medicaid was tightened and State health programmes also suffered reduction.Consequently the number of Americans who were uninsured rose to forty per cent since the taking over by Reagan administration. As a result of these policies, three major groups were unable to gain access to private insurance or government support. These included adults and their children who were in low paid jobs without health insurance, disabled people or those suffering from chronic illness and the unemployed.

Thus we find that in the American model health care is determined by one's ability to pay. Obviously, those who do not have such powers are excluded from health care services.

5.2.5 The Cuban Model of Health Care

The Cuban experience in health care provision stands as a contrast to the European and American models. The provision of free health care to all its citizens was an important part of the agenda of the socialist revolution there. In its 1975 Constitution, health care was codified as a right of all and a responsibility of the State. The socialist ideology has permeated its domestic and international health policies. The policies try to encourage informal doctor - patient relationships and creative use of health education (health education talks in the waiting rooms etc.) The linkage between the ideology and health services is further underlined when the doctors are often called as health gorillas waging war on disease.

Despite a distinctive physician centered character, health care in Cuba did not merely mean the provision of medical care but an integrated view of the preventive, promotive and curative aspects of health. A great deal of emphasis was laid on developing a primary health care system and then a graded referral system and specialities and super specialities. Cuba is often cited as a successful example of combining primary health care and specialist services. Since the approach is an integrated one, there is efficient use of resources with minor ailments being treated at the primary and secondary levels while the tertiary level deals only with cases requiring specialist care. The government's commitment to the overall well-being of its people is reflected in the fact that curative services are not only free to all but there is equal emphasis on the preventive component.

Cuba has claimed that it seeks to become a world medical power, and considering the available indicators (IMR, Physician- population ratio etc.), this claim has considerable credence.

Check Your Progress 2

Note : 1) Write your answers in the space provided.

2) Check your answers with the model answers given at the end of the Unit.

1. Discuss the rise and organisation of the National Health Service in UK

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2. What has been the drawback of not having a universal public insurance scheme in the United States ?

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3. What are the advantages of a universal health insurance scheme as adopted in Canada?

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4. Which country has the most integrated approach to health services delivery ? Discuss its features.

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5.3 THE CURRENT DEBATE ON MARKET VERSUS STATE PROVISION OF HEALTH CARE

The current debate on market vs state favours a strong role for the market. This is because of two reasons. They are (i) world recession and its impact on health and (ii) health is perceived as a profit making business activity. In other words it means privatisation of health care services. We shall briefly discuss these factors.

5.3.1 The impact of World Recession on Health Services

State intervention in welfare services is essentially a post second world war phenomenon, since several developed countries invested in the areas of health, education, housing and social security. This was done to aid recovery after the war as well as to improve the social conditions of the poor and working classes in these societies. The sixties was a period of expansion of welfare services across the world. However, this expansion was arrested during the late seventies and eighties following the world wide recession induced by the oil shock. This had its implications for developing countries as well and resulted in a cutback in government spending on social sectors like health and education. During this period the philosophy which gained momentum was privatisation whereby the economy as well as the private sector saw less involvement of the State and a more prominent role for the market. The advocates of this philosophy believed that freely provided social services were wasteful and therefore sought to limit the scope of State provision of these services.

5.3.2 Privatisation of Health Care Services

The gradual withdrawal of the state from key areas of social services has resulted in a more prominent role for commercial and voluntary services. In countries like UK, where

in the past the welfare state has been strong, the conservative government has made several attempts at dismantling it or atleast curb, its growth. The main fall out of this kind of policy has resulted in a cutback of investment in health services and increasing presence of private hospitals in UK. Even in the US the philosophy of privatisation that gained prominence during Reagan era resulted in cutback of funds for public insurance programmes like Medicare and Medicaid. Alongwith this there was also a move to shut down locally managed community health centres and voluntary hospitals which resulted in a very prominent role for the private sector. The impact of these policies affected the poor, blacks and hispanics whose accessibility to health services was severely affected since they were unable to afford to pay for the required services. This kind of a trend was observed even in the UK but it was not as stark as in the US because there was sufficient political pressure not to dismantle the National Health Services both from within and outside the NHS.

The policies followed by Reagan had far reaching impact on health services in that country. It resulted in spiraling costs of medical care since it was mainly the monopoly of large business houses. The health status of vulnerable groups showed a marked decline and several individuals and groups started realising the need for regulating health care so that costs are contained. In order to achieve this there was growing recognition that health care cannot be treated like other commodities that are bought and sold in the market. Rather it is service to be delivered to people who are vulnerable and in 'need'. It was also observed that health care can become very costly specially with the rise of specialisations and high-technology medical equipment. Since the provision of health care is largely in the hands of private business groups in the US, it is profit not need that dictates the practice of medicine. By allowing a free hand to market forces to decide the content of health care also meant that any planning of services would not be possible and there was an emphasis on the curative rather than the major issues in health. The last US presidential campaign promised far reaching reform in the health sector so as to evolve means to contain its growing costs as well as make it more responsible to the needs of the people. American health care cost was predicted to reach 18 percent of GDP by the turn of the century. Added to this, there was growing insecurity among American middle class about the adequacy and stability of their health insurance. At any point of time, 15 percent of the population is without any health insurance coverage.

The Clinton administration in the post-election period of 1992 planned a federally crafted health reform plan with two key initial objectives: a) cost control, b) health security. However, a number of factors which included political compulsions, negative media coverage and vested-interests of health industry undermined the effort at significant reforms. By 1994, the reform plans were finally shelved.

However, there were lot of incremental reform activities especially at the state and provider level. At the state level, some like Minnesota and Washington have passed legislations that promise to increase coverage and control costs. There were also efforts by health maintenance organisations and physician groups to reduce costs and increase access. It is now widely felt that although there are opportunities for such incremental reforms, there are no opportunities for major and meaningful advances in providing health care coverage to all Americans or in reducing the spiraling costs in health. As a result privatisation of health care services continues to persist and the role of the State is increasingly reduced.

5.4 IMPLICATIONS FOR INDIAN HEALTH SERVICES

The developments in the developed countries have far reaching implications for developing countries. The post mid- seventies has been a watershed for many developing countries since many of them have either cut back or have not increased spending in the welfare sectors. This trend is clearly discernible in India because while the fifties and sixties were the growth periods for public expenditure, the stagnation during the seventies and eighties and during the nineties has resulted in cutbacks in some sectors. This has resulted in a financial squeeze on the public health services and has been an important reason for the growth of private services. During the same period the government has also offered a number of concessions and subsidies to encourage the private sector. It is fairly

3. Given the fact that majority of the Indian people still suffer and die from a host of communicable diseases, how do you think the present policies will affect this majority?

5.5 LET US SUM UP

There have been different approaches to health care delivery across countries. We have focused on those countries that have influenced and continue to influence health care delivery in India. The UK model of the National Health Services had a profound influence on health services development in this country. After the world recession in the mid-seventies, the philosophy of privatisation has gained momentum and we are being influenced by the American model of health care. The Canadian experience is discussed because it may provide us with some ideas of how there can be equal access to health care and also may help to deal with the increased presence of the private sector. The implications of a Universal programme for the delivery of medical care are :

1. The coverage is comprehensive and it may be easier to allocate resources for preventive services by building them as reimbursable benefits in the programme.

2. It lays down a standard rate of reimbursement for doctors and facilities which may be made effective through negotiations between insurance associations, professional associations and the government.

3. Hospital growth can be planned to an extent with a move towards greater decentralisation rather than centralisation of resources and decision-making.

5.6. KEY WORDS

Market : A mechanism or a force which creates a demand for a commodity or service which can be sold at a price giving maximum profit.

State : . Civil government as distinguished from individuals, ecclesiastical authority.

5.7 SUGGESTED READINGS

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5.8 MODEL ANSWERS

Check Your Progress - 1

1. The British model is characterised by the National Health Services which is funded and administered by the State. However, private insurance and hospitals are also available but their proportion is small. In Canada there is a Universal Hospital Insurance Scheme which ensures equal access to all its citizens. Majority of the hospitals are private but the State regulates their functioning in a variety of ways. United States is the only country which relies mainly on private hospitals and insurance schemes for provision of health care. Public insurance schemes have restricted themselves only to certain vulnerable sections of the population.

2. i. Medicare and Medicaid.

   ii. Public

   iii. Government

Check Your Progress - 2

1. The National Health Service was formed after the second world war and its chief architect was Lord Beveridge. This coincided with the broad understanding that State intervention was necessary to improve the poor social conditions of the working population after the war. The NHS is based on a tripartite system consisting of the Hospital Board, Executive Council and the local committees.

2. The major drawback of not having a Universal public insurance scheme as in the United States is that health care provision has been dictated by market forces rather than needs of the population. This approach has not only resulted in spiraling costs of medical care but also has denied access to the vulnerable sections of the population, who need most care.

3. The greatest advantage of the Canadian model has been to ensure equal access, contain costs to a large extent and the state has played quite an effective role in regulating the private sector.

4. Cuba

   - Health is a right of all citizens and its responsibility lies with State.
   - Informal doctor-patient relationships
   - Effective health education
   - Equal access to all levels of health services by all.
   - Greater emphasis on primary health care system.

Check Your Progress - 3

1. The World recession in the mid seventies had a profound impact on welfare services in both developed and developing countries. There was a cutback on spending on health and welfare services.

2. The term privatisation which gained prominence during the seventies and eighties implied not only a cut back of government spending but also a more prominent role for the private sector in both the economy and service sectors.

3. Given the kind of health problems that are prevalent in India, increasing privatisation would mainly further reduce access to the vulnerable sections and will not really be able to tackle the problems of communicable diseases.

NOTE

अन्नाद् भवन्ति भूतानि पर्जन्यादन्नसंभव ।
यज्ञाद् भवति पर्जन्यो यज्ञः कर्मसमुद्भवः ॥ १४ ॥

From food creatures become; from rain is the production of food; rain proceedeth from sacrifice; sacrifice ariseth out of action 14

— Bhagvad Gita, Third Discourse

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