
UNIT 2 NATIONAL HEALTH PROBLEMS AND CONTROL PROGRAMMES-II

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2.0 OBJECTIVES

After completing this unit, you should be able to:

- describe the various components of National Health Programmes for non-communicable diseases; and
- describe the role of health worker in preventive, promotive, curative and rehabilitative aspects of non-communicable diseases.

2.1 INTRODUCTION

In Unit 1 we have discussed about the various National health problems and control programmes related to communicable diseases. Since the cause of communicable diseases is always known these can be prevented and treated fully but non-communicable diseases are not always preventable because causative factors are not known. The non-communicable diseases include heart diseases, cancers, diabetes, obesity, blindness, accidents and deficiency diseases. In this unit we shall discuss National health programmes for some of these diseases, which have been launched by Government of India. We will also describe how these national health programmes are helpful in reducing the sickness and death rates. By learning these you will be able to provide preventive, promotive, curative and rehabilitative health services to the community.

2.2 NON-COMMUNICABLE DISEASES

In this section we shall briefly focus on non-communicable diseases such as heart problems and Coronary Heart Diseases (CHD), hypertension, accidents, blindness, diabetes, cancer, mental illness etc.

Chronic Heart Disease

Chronic Heart Disease (CHD) is the cause of 25-30 per cent of deaths in most industrialized countries and is defined as impairment of heart function due to inadequate blood flow to the heart compared to its needs. The risk factor of CHD includes smoking, hypertension, high serum cholesterol and other genetic and hormonal factors etc. It can be controlled by using population approach which includes dietary changes, smoke free society, reducing blood pressure and regular physical activity.

Hypertension

High blood pressure means when the systolic pressure is above 140 mm Hg and diastolic blood pressure is above 90 mm Hg. High blood pressure is a major risk factor for CHD, Stroke, heart and kidney failure. The higher the B.P. lower is the life expectancy. Blood pressure rises with age in both sexes. It may be primary (due to unknown cause) or secondary due to some diseases (kidney diseases etc.).

Heredity, obesity, high salt intake, intake of saturated fats, high alcohol intake, less physical activity, stress are some of the risk factors which give rise to hypertension.

It can be controlled and prevented by population (people's) approach which includes dietary changes i.e., low salt intake, moderate fat intake, avoidance of alcohol intake, weight reduction, promotion of exercise, reduction of stress. Early diagnosis and treatment is very important to prevent complications.

Accidents

Accident is defined as "an unexpected, unplanned occurrence, which may involve injury". The accident can be domestic accidents, industrial, roadway, air accidents and burns. Accidents are increasing in India. India has highest road accident rates i.e., one out of 42 vehicles meet with an accident and about 8 deaths occur for every 1000 vehicles. The peak mortality and morbidity are seen in the 15-24 year age group mainly in case of males.

Accidents can be prevented and controlled by:

- identifying and avoiding risk factors and reporting of accidents.
- This will help in taking effective measures to minimize accidents.
- Take measures, which include:
 - Safety education should begin at school level
 - Drivers should be educated regarding safe driving and maintenance, inhibiting use of drugs and alcohol while driving.
 - People should be educated about traffic rules, first aid, and promotion of safety measures.
 - Laws should be enforced strictly.

Blindness

India has approximately 12 million blind people. Cataract, trachoma and bacterial conjunctivitis are responsible for 50-90 per cent cases of blindness. Other causes of blindness are Vitamin A deficiency, injuries, tumours etc.

It has been estimated that there is an annual incidence of 2 million cataract-induced blindness in India. It is more prevalent in U.P., J&K, MP, Orissa and Rajasthan.

Diabetes

Diabetes is a long term disease. In India its prevalence rate is 1-2 per cent. Easy and sedentary life style, excessive intake of alcohol and stress increase the risk of diabetes.

Diabetes Mellitus is a disorder of carbohydrate metabolism in which sugar and starch are not properly absorbed due to lack of insulin and defective production or action of insulin. It is characterised by excessive thirst and urination. The accumulation of sugar leads to glycosuria and hyperglycemia. It occurs at any age and is transmitted genetically to future generation. There can be hypoglycemia (low blood sugar level) and hyperglycemia (high blood sugar level) which may lead to many complications.

Cancer

Cancer is characterised by abnormal growth of cells in a particular organ which invades the near and distant organs of the body.

Cancer cases are rising in India and it is one of 10 leading causes of death. It is estimated that there are 1.5 to 2 million cases of cancer and about 0.6 million cases occur every year.

The various factors that lead to cancer are smoking, alcohol intake, dietary factors, exposure to radiations and genetic factors etc.

Mental Illness

In India, mental illness is also at rise due to stress, competition, isolation, single family, insecurity, industrialization, urbanization etc. It is important for you to understand the illness as it is essential for an individual to be mentally healthy to live healthy life.

Mental morbidity in India is approximately 18-20 per 1000. There are major and minor illnesses. The major illnesses are called psychoses and minor are neurosis and personality disorders.

Mental illnesses are due to many causes i.e. heredity, pathological conditions, social causes, environmental factors, drugs, radiation etc. Mental illness can occur in various stages of life under stressful conditions i.e. **pregnancy, first 5 years of life, school age, adolescence, and old age.** During these stages, there is need for affection, belongingness, independence, recognition and if these needs not fulfilled there is tendency of mental illness.

2.3 NATIONAL CONTROL PROGRAMME FOR NON-COMMUNICABLE DISEASES

Government of India has launched various National programmes for prevention and control of non-communicable diseases.

2.3.1 National Programme for Control of Blindness

The National Programme for Control of Blindness (NPCB) was launched in 1976 and includes the earlier trachoma control programme started in 1968. This is a 100% centrally sponsored Programme.

Programme Goal

- To reduce blindness in the country from 1.4 per cent to 0.3 per cent by 2000 AD.
- To provide comprehensive eye care through Primary Health Care.

Programme Approach

- Provide an oral dose of 200,000 International Units (2 lack IU) of vitamin A once in 6 months to children between 1-5 years of age.
- Intensive health education for eye care through the mass media.
- Extension of ophthalmic services in the rural areas through mobile units and eye camps.
- District Blindness Control societies have been established throughout the country under the chairmanship of district collector/deputy commissioner.
- Establishment of permanent infrastructure for eye health (Table 2.1) as an integral part of general health services.
- The primary health centres, taluk and district hospitals are being strengthened to provide comprehensive eye health care services. A National Institute of Ophthalmology has been created at New Delhi (Dr. Rajendra Prasad Centre for Ophthalmic Sciences) to monitor and guide the programme.

The voluntary organizations are organizing eye camps in remote rural and urban areas with the permission from state authorities. They have been active in providing eye health education, preventive and rehabilitative and surgical services to control blindness.

As you have learned health education is an important component at all levels of implementation of National Blindness Control Programme. The programme also includes regular eye check-up and provision of vitamin A prophylaxis and service facilities in rural areas.

Table 2.1: Development of Infrastructure for Eye Care

| Item | Current achievement |
|---|---------------------|
| 1. Strengthening of Primary health centre | 5633 |
| 2. Central Mobile Units | 76 |
| 3. Strengthening of district hospitals | 445 |
| 4. Upgrading of department of ophthalmology in Medical colleges | 82 |
| 5. Establishment of Regional Institutes | 10 |
| 6. Ophthalmic assistant training centres | 37 |
| 7. District mobile units | 341 |
| 8. State Ophthalmic Cells | 21 |
| 9. Establishment of district blindness control societies (DBCS) | 501 |
| 10. Eye Banks (Govt.) | 166 |

Source: Government of India Annual Report, Ministry of Health and Family Welfare, New Delhi 2000-2001.

Check Your Progress I

- i) National Programme for Control of Blindness (NPCB) was launched in.....
- ii) The goal of NPCB is to reduce blindness in the country from to 2000 AD.
- iii) Children from 1-5 year are given once in
- iv) The approach of NPCB consists of :
 - a)
 - b)
 - c)
 - d)
 - e)

2.3.2 National Diabetes Control Programme (NDCP)

The National Diabetes Control Programme (NDCP) was included in the 7th Five-Year Plan as one of the central Health Sector Programme.

Objectives

- a) Identification of high risk cases at early stage and imparting health education with focus on primary prevention.
- b) Early diagnosis of disease and appropriate management to reduce morbidity and mortality (sickness and death).
- c) Prevention of acute as well as chronic cardio-vascular and renal complications of disease.
- d) Ensure social and emotional adaptation leading to an improved quality of life.
- e) Rehabilitation of partial or totally physically handicapped diabetes with emphasis on optional organ or body function.

Programme Approach

Primary Level Health Care

Doctors, nurses, health workers/ ANMs suitably trained work as a team to identify high risk patients at early stage and refer them as required.

Secondary Level Health Care

Those diabetics who can not be managed at home or health centre are referred to district hospitals to prevent complications. Referral is required in following conditions:

- Pregnant diabetic/diabetics in pregnancy.
- An insulin dependent diabetic.
- For team management of diabetics by doctors, nurses, dieticians, social workers etc.

Tertiary Level Health Care

The main objective of this level is to provide highly specialized care (Medical College Hospital, big institutions) providing laboratory and proper management. The other dimension of work at the tertiary level is the research component.

Check Your Progress 2

- i) Objectives of the NDCP are:
- a)
 - b)
 - c)
 - d)
 - e)
- ii) Referral of diabetic is required for:
- a)
 - b)
 - c)

2.3.3 National Cancer Control Programme (NCCP)

The Government of India started the cancer control programme in a limited form during the year 1975-76 with central assistance of Rs. 2.5 lakh to institutions for purchase of cobalt therapy units for treatment of cancer patients.

Programme Goal

Prevention of cancer, early detection of cancer and provision of treatment facilities in the country.

Schemes Initiated from the Year 1990-91

a) **Scheme for District Project**

At district level project work for preventive health education, early detection and pain relief measures is carried out.

b) **Development of Oncology Wings in Medical Colleges/Hospitals**

According to the scheme, financial assistance up to rupees one crore (in phases) is provided to the concerned state government for purchase of equipment which include one cobalt unit.

c) **Scheme for Financial Assistance to Voluntary Organizations**

Under this scheme, financial assistance up to Rs.5.00 lakh is provided to the registered voluntary organizations recommended by the state government for the purpose of undertaking health education and early detection activities in cancer.

d) **Utilization of Funds by the State Governments**

It has been observed that sometimes there is a long time gap between the release of funds by the union ministry and utilization of same by the state governments. This delays the effective implementation of the programme.

Role of Health Worker in Prevention and Control of Cancer

- Create awareness among masses regarding causes of cancer.
- Motivate people for early diagnosis and treatment.
- Educate the public about warning signs of cancer i.e., a lump in the breast, a change in the wart or mole, persistent cough or hoarseness, excessive loss of blood, sore not healing up and unexplained weight loss.
- Helping in screening of cases and maintaining records.
- Teach women the procedure of examining breast.
- Follow up of cases and counselling patient and family.

Check Your Progress 3

- National Cancer Control Programme was started during
- Programme goal is:
 -
 -
 -
- The scheme for District Project in NCCP aims at:
 -
 -
 -
- Role of voluntary organizations in NCCP is:
 -
 -

2.3.4 National Mental Health Programme

The Government of India decided to launch the National Mental Health Programme (NMHP) during the 7th Five-Year Plan Period.

Programme Aim

The programme aims to ensure availability and accessibility of minimum mental health care for all in the near future particularly to:

- The most vulnerable and under privileged sections of the population.
- Encourage application of mental health knowledge in general health care and social development.
- Promote community participation in the mental health service development.
- Stimulate efforts towards self-help in the community.

Programme Approach

A National Advisory Group on mental health was constituted under the chairmanship of the Secretary, Ministry of Health and Family Welfare for the effective implementation of this National Health Programme.

Eleven institutions have been identified for imparting training to health personnel under the programme. These eleven colleges will be providing training in basic knowledge and skills in the field of mental health to the Primary Health Care doctors and para-medical personnel.

Assistance is given to Himachal Pradesh, Assam, Meghalya, Sikkim, Mizoram, Jammu and Kashmir, Nagaland by supplying books, journals and basic equipment required for delivery of mental health care in various districts and states.

Check Your Progress 4

- i) National Mental Health Programme was launched to ensure:
.....
- ii) Aims of NMHP are:
 - a)
 - b)
 - c)
 - d)
- iii) Purpose of eleven identified institutions under NMHP is:
.....

2.4 NUTRITIONAL PROBLEMS AND PROGRAMMES

Nutritional problems are of great concern in India. Socio-economic and development factors are root cause of these problems.

1) Protein Energy Malnutrition (PEM)

PEM is mainly due to inadequate food intake i.e. food gap. It occurs more in children of 1-3 years of age, more so in first year of life. Eighty per cent of PEM cases are mild and moderate and are usually not noticed by the parents. About 1-2 per cent of pre school children get severe form of PEM. This problem is in all states. Do you know how PEM is caused? PEM is primarily due to inadequate intake of food both in quality and quantity and due to infections notably diarrhoea, respiratory infection, measles and intestinal worms. The two most common problems due to PEM are Marasmus (starvation) and Kwashiorkor. It is a vicious circle — infection contributing to malnutrition and malnutrition contributing to infection as shown in Fig. 2.1.

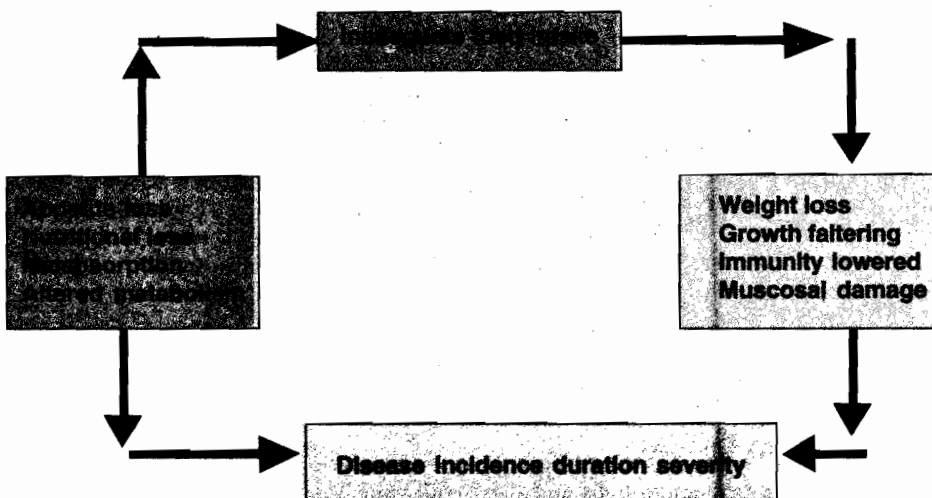


Fig. 2.1: Malnutrition/Infection cycle

2) Nutritional Anaemia

The second major nutritional problem in India is anaemia, which is very common especially among women of the reproductive age group and pre school children. Surveys indicate that 50 per cent of all pregnant and lactating women have nutritional anaemias. Iron deficiency can arise either due to inadequate intake or poor absorption of iron from diets, chronic blood loss or due to excessive loss of iron from the body. Anaemia can also be caused due to malaria and worm infestation. Anaemia in pregnancy may cause low birth weight babies, abortions, premature births and post partum haemorrhage. It causes lethargy and reduces working capacity (Fig. 2.2).

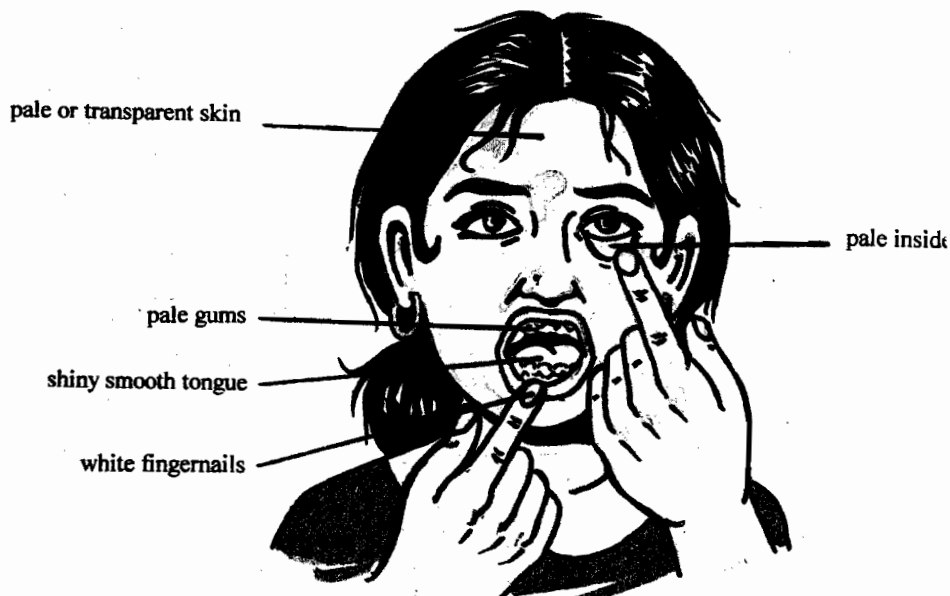


Fig. 2.2: Symptoms of anaemia

3) Vitamin A Deficiency

Vitamin A deficiency is a serious nutritional health problem especially in children in the age group of 1-3 years. It causes xerophthalmia, which leads to blindness in children (Fig. 2.3). About 12,000 to 14,000 children are estimated to go blind every year because of Vitamin A deficiency. The disease is associated with poverty, ignorance, infections especially diarrhoea, measles and PEM. It occurs more in rice eating states as rice does not contain carotene, therefore, causes vitamin A deficiency. Five doses of Vitamin A are administered to all children under three years of age.

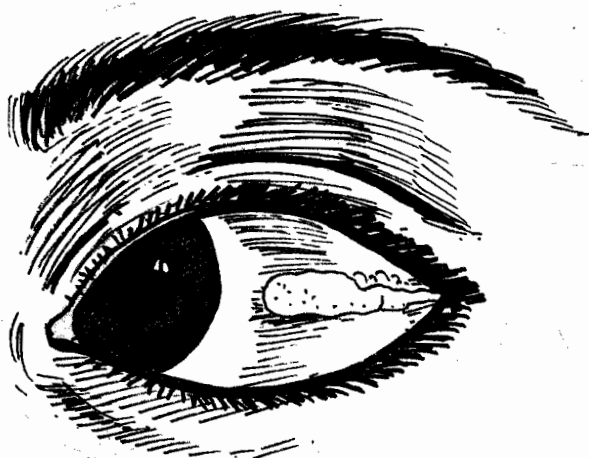


Fig. 2.3: Xerophthalmia

4) Iodine Deficiency Disorder

Iodine is very serious problem in India and also in our neighbouring countries such as Bangladesh, Bhutan, Indonesia, Nepal, Sri Lanka, Thailand and Myanmar. In India, the problem is more in hilly areas, northern and eastern states. About 200 million people are exposed to the risk of Iodine Deficiency disorders in our country. You should educate the community to use iodised salt in place of common salt.

Iodine deficiency causes not only the enlargement of thyroid gland (known as goitre) (Fig. 2.4) but also many other disorders such as hypothyroidism (decreased secretion from thyroid gland) with mental dullness and increase in weight etc. Iodine deficiency in mothers can affect the foetus in the womb and the child may develop various problems like retarded growth and developments, hearing and speech defects. There can also be abortion, miscarriage and still births.

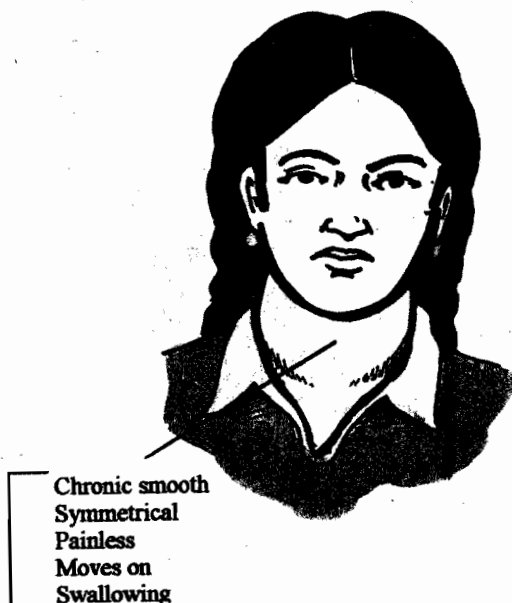


Fig. 2.4: Goitre

5) Low Birth Weight

Low Birth Weight babies are also a major health problem in India and also in various developing countries. About 30 per cent of the babies born have low birth weight (less than 2.5 kg) where as in developed countries it is only 4 per cent. This problem is due to malnutrition and anaemia of the mothers.

By now you must have understood that all these major nutrition problems are mostly due to inadequate intake of various specific nutrients and other causes such as infections, poor absorption, absence or non availability of specific nutrients etc.

It is also evident that all above nutritional diseases are preventable by helping people to improve their diet and removing associated factors. You as health workers need to educate family members about the importance of prescribed diet during childhood, pregnancy and lactation besides for other members of the family. You also need to educate people in the community about good nutrition as a basic component of health for attainment of normal growth and development and for maintenance of health throughout life. The Government of India has launched specific programmes for the prevention and control of these nutritional problems. You will learn more about your participation in these programmes.

Check Your Progress 5

- i) a) Protein calorie malnutrition occurs in the age of.....
- b) Iodine deficiency leads to and
- c) Vitamin A deficiency leads to
- ii) Iron deficiency anaemia is due to
 - a)
 - b)
 - c)
 - d)

6) National Programmes

Several feeding programmes and programmes to overcome specific deficiency disease are being initiated by the Government.

Nutrition component of this programme includes supplementary nutrition, Vitamin A Prophylaxis, iron and folic acid distribution. Beneficiaries are children below 6 years, pregnant and lactating mothers. These services are provided through anganwadi workers, each anganwadi covers a population of 1000 providing health, nutrition and pre-school education services.

Balwadi Nutrition Programme

Food supplement is provided to children in the age group of 3-6 years. 300 kcal and 10 gm protein per child per day is given. Programme is implemented through Balwadis with the help of voluntary workers.

Prophylaxis against Nutritional Anaemia

Programme for the prevention of nutritional anaemia was launched during the fourth five year plan. To distribute iron folic acid tablets to pregnant mothers and to children (1-12 years). MCH centers, PHC, sub-centres, ICDS projects are the implementing organs at community level.

Vitamin A Prophylaxis Programme

This Programme was launched in 1970 to administer Vitamin A orally(200,000 IU) to all pre-school children every 6 months through peripheral health workers to combat Vitamin A deficiency.

National Iodine Deficiency Disorders Control Programme (NIDDCP)

Realizing the magnitude of the problem of Iodine deficiency Government of India launched a 100 per cent centrally sponsored National Goitre Control Programme (NGCP) in 1962 with focus on provision of iodized salt to endemic areas. For effective control of IDD, Government of India, in 1985, took a decision of universal Iodination of edible salt by 1992. The scheme started from April, 1986 in a phased manner.

Essential Components of the Programme are:

- Use of iodized salt in place of common salt (Fig. 2.5)



Fig. 2.5: How to avoid getting a goitre

- Monitoring and surveillance
- Manpower training
- Mass communication (health education)

Programme Aims

- To bring down the incidence of IDD to below 10 per cent by 2000 AD.

Programme Approach

Local Governments have completely banned the use of salt other than iodized salt and have set iodine deficiency disorder control cells to ensure success of the Programme. A National Reference Laboratory for monitoring IDD has been set up at the Biochemistry Division of National Institute of Communicable Diseases, Delhi for training medical and paramedical personnel. An evaluation of salt iodination Programme was carried out in some districts. The results of evaluation have shown that the prevalence of goitre has declined.

Role of Health Worker in Prevention and Control of nutritional problems

- Help in early detection of malnutrition cases.
- Provide health education to individuals, pregnant and lactating mothers, family and community.
- Distribution of iron-folic acid tablets.
- Supervise the work of anganwadi and balwadi worker during assessment of nutrition status by clinical examination and anthropometry and assessment of dietary intake.
- Carrying out nutritional surveillance i.e., keeping watch over nutrition to take a decision to improve nutritional status of the community.

Check Your Progress 6

- National Goitre Control Programme was launched in
- The essential components of NIDDCP are:
 -
 -
 -
 -
- The aim of the programme is:
.....
.....

2.5 LET US SUM UP

In this unit, we have discussed National Health Problems and Programmes-II related to non-communicable diseases. We have discussed, National Programme for Control of Blindness which aims at provision of comprehensive eye care through primary health care. You have also learned about National Iodine Deficiency Disorder Control Programme, which focuses on provision of iodized salt to endemic areas. We have discussed about National Diabetes Control Programme, which aims at early diagnosis of disease and appropriate management to reduce sickness and death rates. We have also discussed about National Cancer Control Programme, which focuses on preventive health education, early detection and pain relief measures to cancer patients. At the end we have discussed about National Mental Health Programme which focuses on availability and accessibility of minimum mental health care for all in the near future.

2.6 GLOSSARY

| | |
|----------------------------|--|
| Cataract | : Opacity of the lens of the eye causing partial or complete blindness. |
| Cobalt therapy unit | : Used for gamma irradiation in radiotherapy. |
| Cretinism | : A condition caused by lack of thyroid secretion, characterized by arrested physical and mental development. |
| Diabetes | : A disease characterized by excessive excretion of urine. |
| Goitre | : A disease Caused by lack of iodine in diet. |
| Infrastructure | : Subordinate services. |
| Insulin | : A protein hormone formed in the beta cells of pancreatic islets of langerhans, injectable drug given in diabetes mellitus. |
| Trachoma | : A chronic infectious disease of the conjunctiva and cornea producing photophobia, pain and lacrimation. |

2.7 MODEL ANSWERS

Check Your Progress 1

- i) 1976.
- ii) 1.4%, 0.3%
- iii) 2 lack IU of vitamin A, 6 months.
- iv) a) Intensive health education
b) Extension education
c) Care through mobile eye units
d) Eye camps
e) Permanent infrastructure for eye health

Check Your Progress 2

- 1) a) Identification
b) Early diagnosis
c) Prevention
d) Improved quality of life
e) Rehabilitation
- ii) a) Pregnant diabetic
b) Insulin dependent diabetic
c) Team management of diabetic

Check Your Progress 3

- i) 1975-76.
- ii) a) Prevention
b) Early detection
c) Treatment

- iii) a) Preventive health education
- b) Early detection
- c) Pain relief measures
- iv) a) Health education
- b) Early detection

Check Your Progress 4

- i) Availability and accessibility of minimum mental health care to all.
- ii) a) Services to most vulnerable and under privileged
- b) Application of mental health knowledge in general health care and social development.
- c) Promote community participation.
- d) Stimulate self-help in the community
- iii) Imparting training to health personnel under the programme.

Check Your Progress 5

- i) a) preschool age.
- b) Goitre, Gretinism.
- c) Blindness.
- ii) a) Inadequate intake of iron
- b) Poor absorption
- c) Excess loss of blood
- d) Worm infestation

Check Your Progress 6

- i) 1962.
- ii) a) Use of iodized salt
- b) Monitoring and surveillance
- c) Manpower training
- d) Mass communication (Health Education)
- iii) To bring down incidence of IDD to below 10% by 2000.

2.8 FURTHER READINGS

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