UNIT 3 PREVENTION AND MANAGEMENT OF DISEASES

Structure

3.1 INTRODUCTION

According to the World Health Organization (WHO), health is a state of complete physical, mental, and social well being and not merely absence of disease or infirmity. Diseases cause morbidity and mortality. Broadly, there are two types of diseases: communicable and non-communicable diseases. In order to prevent, cure, and manage various diseases, the Government of India has launched several programmes. In this unit, you will know about the prevention and management of diseases.

Causes of Death World Wide: Estimates for 1999

No.	Types	(in thousands)	Percentage
1	Communicable diseases	17380	31
2	Non-Communicable diseases	33484	59.8
3	Injuries	5101	9.1
4	Cardiovascular diseases	16970	30.3
5	Cancers	7065	12.6
6	Respiratory diseases	3575	6.4
7	Digestive diseases	2409	3.7
8	Neuropsychiatric disorders	911	1.6
9	Genitourinary diseases	900	1.6
	Total	**55965**	

Source: World Health Report, 2000

After going through the unit you should be able to

- explain the measures of communicable and non communicable diseases
- explain common diseases in children, adolescents, women, adults and old age
- understand common causes and measures to prevent these diseases
- describe important activities under various national health programmes.

3.2 COMMON COMMUNICABLE AND NON COMMUNICABLE DISEASES

A disease is an abnormal condition affecting the body of an organism assumed to be a medical condition associated with specific symptoms and signs. The disease in general can be divided into two main categories- communicable diseases & non-communicable diseases.

3.2.1 Communicable Diseases

The communicable diseases are those which can spread from one person to another person and are caused by a disease agent which can be parasites or micro -organisms. The variations in signs and symptoms are common, however, each disease has its own specific grouping of symptoms. These micro organisms could be classified as fungus, bacteria, and virus. These are transmitted from one person to another through infected air, water, food, insect bites, body fluids, like blood and secretions, etc. Anderson defined communicable disease as a disease that can be transmitted from one person to another or, from lower animals to higher animals. According to Brain, communicable diseases are infectious diseases that can be passed from one person to another and from an animal to a person. Olaoye classified communicable diseases into four categories: water borne diseases, air borne diseases, insect borne, and other diseases that are transmitted by contacts and through anthropods.

For instance, communicable diseases are those caused by fungus- skin infections etc; bacteria- diarrhoea, sore throat, ear infections, eye infections, boils etc.; viral infections like, sore throat, jaundice, parasites- worm infestation like round worm, thread worm, malaria, etc.

3.2.2 Non-Communicable Diseases

The non-communicable diseases are those which cannot spread from one diseased person to another, and are due to dietary deficiencies, life style disorders, behaviour disorder, stress, lack of exercise, occupational stress etc. Some important causes of non communicable diseases are given below.

i) **Deficiency of nutrients in diet:** The following are major forms of deficiencies led to non communicable diseases.

   a) Vitamin deficiency, such as vitamin A deficiency can result in poor vision in inadequate light; vitamin B complex deficiency can result in ulcers in the mouth, or anaemia, weakness; vitamin C deficiency can result in bleeding from gums and skin problems; Vitamin D deficiency can result in rickets or defective development of bones in children.

b) Inadequate intake of proteins in a diet can result in inadequate weight and inadequate height gain in young children.

c) Inadequate intake of iron in a diet can result in iron deficiency like anaemia in children and pregnant woman.

d) Inadequate intake of calcium in a diet can lead to bone defects.

ii) Excessive intake of nutrients in diet: Excessive intake of fats in diet can result in heart diseases, obesity; excessive intake of carbohydrates can lead to diabetes; intake of chewing tobacco can result in cancer of mouth and tongue.

iii) Others: Besides deficiencies and excessive intakes of nutrient, there are other factors that led to non communicable disease given below.

a) Inadequate exercise, sedentary life style, smoking, can lead to heart disease, high blood pressure, cancer of lungs, cancer of mouth

b) Excessive stress can also result in several mental problems

c) Intake of chewing tobacco can result in cancer of mouth and tongue.

Differences between Communicable and Non-Communicable Diseases

Communicable Diseases	Non-Communicable Diseases
1. Transmitted by person-to-person contact	1. Are not transmitted by person-to-person contact
2. Measurable symptoms include fever, headaches, muscle aches, cough, or chill	2. Warning signs of non communicable diseases are high blood pressure, obesity, high cholesterol, diabetes

The United Nations has emphasized that in 2004, non-communicable diseases accounted for 60 per cent of the deaths occurring worldwide. Among non communicable diseases, cardiovascular diseases, cancer and respiratory illness exact major tolls in most regions. Because many non communicable diseases are chronic, their treatment and management requires a comprehensive and coordinated response by the health system. The following non communicable diseases are on the increase in India like:

i) Cancer and cardiovascular diseases

ii) Psychosomatic diseases

iii) Respiratory allergy

iv) Food poisoning

v) Psychiatric disorder

vi) Alcoholic addiction

3.3 COMMON DISEASES IN CHILDREN

Diseases that are common among children are malnutrition resulting in inadequate weight and height as per their age; Vitamin A & D deficiency leading to night blindness and rickets respectively; diarrhea, infections of respiratory system, ear & eye infections, worm infestations, skin infections, measles, whooping cough and

poliomyelitis. The common infectious diseases among children are broadly categorized as

- respiratory-common cough and cold,
- skin complaints-hand, foot and mouth diseases,
- gastrointestinal diarrhoea, and
- other infections-conjunctivitis.

The infant mortality rate (IMR, deaths among children in first year) of 64 per 1000 live births (2000) in India is very high. In rural areas, this figure will be much higher. About 50 to 60 per cent of this is caused by mortality during the neonatal period (0-28 days) and particularly in the first week of life. Several factors contribute to this mortality. These include poor maternal health during pregnancy, frequent child births, inadequate care of mothers at risk, poor infrastructure facilities, lack of care of newborn at birth and practically no facilities for newborn care from primary to tertiary levels. Low birth weight infants, either due to premature birth or due to intra-uterine growth retardation, result from various factors such as low maternal weight and height, frequent pregnancies, maternal malnutrition and anaemia, chronic maternal diseases and pregnancy complications. Low birth weight, if particularly associated with premature birth is a major underlying factor for newborn or infant mortality. Non- immunization of pregnant women with tetanus toxin may result in death due to tetanus in young child. These diseases can be prevented by

- adequate feeding,
- supplementation with vitamin-A and iron-folic acid,
- immunization with DPT, OPV, BCG, measles vaccine,
- early diagnosis and management of respiratory infections, diarrhoea,
- proper hygiene and sanitation,
- safe water and safe disposal of wastes and excreta, and
- health education of mothers for feeding and good hygienic practices.

The best ways to protect your child against communicable diseases are

i) To maintain his resistance by being sure he is in good health

ii) To avoid every known chance of exposure to disease and keep the child away from all persons who are suffering from communicable diseases and

iii) To take advantage of immunization and vaccination against such diseases

3.4 COMMON DISEASES IN ADOLESCENTS

3.4.1 Need for Care of Adolescents

There are many interrelated reasons why we need to pay attention to the health of adolescents:

i) To reduce death and disease in adolescents- an estimated 1.7 million young people aged from 10 to 19 die each year, mainly from accidents, violence, pregnancy related problems, or illnesses that are either preventable or treatable. Many more develop chronic illness that damages their chances of personal

fulfilment.

ii) To reduce the burden of disease in later life as malnutrition in childhood and in adolescence can cause lifelong health problems, as failure to care for the health needs of young pregnant women can damage their own health and that of their babies. This is the age when sexual habits and decisions about risk and protection are formed. Some of the highest infection rates for sexually transmitted infections are in adolescence. The HIV/AIDS pandemic alone is sufficient reason to look anew at how health services address the needs of adolescents. Many diseases of late middle age, such as lung cancer, bronchitis, and heart disease, are strongly associated with a smoking habit that begins in adolescence.

iii) To invest in health today and tomorrow as healthy and unhealthy practices adopted today may last a lifetime. Today's adolescents are tomorrow's parents, teachers, and community leaders. What they learn they will teach to their own children. Adolescence is a period of curiosity, when young people are receptive to information about themselves and their bodies, and when they begin to take an active part in decision making.

iv) To deliver on human rights, the Convention on the Rights of the Child (CRC) says that young people have a right to life, development, and (in Article 24) "the highest attainable standard of health and to facilities for the treatment of illness and rehabilitation of health". The CRC gives young people the right to preventive healthcare, and calls for specific protection for those in exceptionally difficult conditions, or living with disabilities. Under the CRC, governments not only have a duty to ensure services for good health care, but also have a duty to ensure that young people can express themselves, and that their views are given weight according to their age and maturity.

v) The protection of human capital is another concern. In some societies, two out of three adolescents are involved in productive work, while many young women below the age of 20 are already mothers. If they are no longer able to fulfil these roles because of injury, illness or psychological damage, the cost is primarily a human one, but there is also a cost to society. Economic development, as well as personal fulfilment, is strongly related to the health and education levels of the population.

3.4. 2 Essential Health Services for Adolescents

The core package for improving adolescent health and development should be as follow.

i) Provide immunization (Immunization monitor growth and development)

ii) Identify and assess problems and problem behaviour, managing these wherever possible or, referring young people if they cannot

iii) Offer information and counselling on developmental changes, personal care and ways of seeking help

iv) Programmes are run for young children but not for an older sister or brother Adolescent girls need protection from rubella before they become pregnant. Vaccines are also available for meningitis, hepatitis and tetanus.

3.4.3 Essential List of Clinical Services

i) General health services for tuberculosis, malaria, endemic diseases, injuries, accidents, and dental care

ii) Reproductive health including contraceptives, STI treatment, pregnancy care, and post abortion management

iii) Counselling and testing for HIV, which should be voluntary and confidential

iv) Management of sexual violence

v) Mental health services, including services to address the use of tobacco, alcohol and drugs

vi) Information and counselling on development during adolescence, including reproductive health, nutrition, hygiene, sexuality, and substance use

3.5 COMMON DISEASES IN WOMEN

Compared with developed countries, as well as some developing countries, the current maternal mortality ratio (deaths among women during pregnancy and after delivery) of 407 per 100,000 live births (1998) in India is quite high. Maternal Care (during pregnancy, delivery, and lactation) in rural areas and urban slums is woefully inadequate. In rural areas, majority (about 80 per cent) of births are occurring outside the institutions, and are attended to by untrained birth attendants. Some of the important causes of maternal mortality (deaths) are sepsis (infections), haemorrhage (bleeding), toxaemia, fits and high blood pressure, illegal abortion, and malnutrition. These women usually suffer from anaemia due to deficiency of iron and vitamin B-complex, malnutrition due to inadequate intake of food.

Preventive Measures

Some of the preventive measures required for the improvement of health status of adolescents are narrated below.

i) Liberalization of abortion laws and the enactment of Medical Termination of Pregnancy (MTP) Act in 1971 were the direct outcome of the realization of the fact that induced abortion performed by unqualified persons under unhygienic conditions significantly increased maternal mortality and morbidity. Facilities for MTP services by properly trained and skilled doctors are to be provided, wherever needed, in rural areas and urban slums.

ii) Systematic efforts are to be made to increase progressively antenatal registration and care of pregnant women.

iii) It is also to be progressively ensured that almost all deliveries are conducted under aseptic conditions by trained health personnel, i.e., the *dais* or female midwives.

iv) Pregnant and nursing mothers should get two to three doses of tetanus toxin, and, as nutritional supplements, iron and folic acid.

v) During post natal check-ups, mothers are to be educated on breast feeding, growth monitoring, proper weaning practice and immunization of the child, and on personal hygiene, proper diet and family planning.

3.6 COMMON DISEASES IN OLD AGE

In India, about 7.2 per cent of the total population is above 60 years of age. The health problems in old age can be classified as follows.

i) **Health problems due to aging process**: these are due to changes in the body which occur in the body and results in health problems such as cataract (opacity in the lens of the eye), increase in eye pressure resulting in difficulty or glaucoma, deafness (due to nerve degeneration), softening of bones (osteoporosis), difficulty in breathing, changes in mental outlook and decrease in the perception of senses.

ii) **Problems associated with ageing**: certain disease are more common after 40 years of age such as degenerative diseases of blood vessels and the heart, cancer, are also more common in old age. Accidents due to softening of bones, diabetes, diseases of the joints resulting in difficulty in walking, diseases of the respiratory system such asthma, infections, and difficulty in passing urine, urinary tact infections, etc., are also present.

iii) **Psychological problems***:* mental changes result in impaired memory, rigidity of outlook, dislike for change, and emotional disorders from social maladjustment.

3.7 PREVENTION OF COMMON DISEASES

The goals of medical care are to promote health, preserve health and to restore health when it is impaired and to minimize suffering and disability resulting from diseases. These goals can be fulfilled by the following measures.

- Adopting healthy life styles such as eating a good and balanced diet, adequate exercise, not smoking, drinking, or other drug abuse,
- Health education
- Regular immunization
- Use of specific nutrients
- Protection against accidents and occupational hazards
- Avoiding allergens
- Control of air, water pollution, or other environmental hazards
- Environmental modifications such as safe water, use of sanitary latrines, improvement in housing, control of pests, cleanliness and hygienic practices
- Regular health checkups for early recognition of diseases
- Seeking health advice at the onset of early signs and symptoms of disease
- Proper rehabilitation in case of disability resulting from diseases.

In this section, you studied about common diseases in children, common diseases in adolescents, common diseases in women, common diseases in old age, and prevention of common diseases. Now answer the questions given in Check Your Progress 1.

Check Your Progress 1

Note: a) Write your answer in about 50 words

b) Check your answer with possible answers given at the end of the unit.

1) Mention a few common diseases among adolescents.

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2) What are the common diseases among old persons?

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3.8 NATIONAL HEALTH PROGRAMME FOR CONTROL OF COMMUNICABLE DISEASES

Various National Health Programmes launched for the control of communicable diseases in India are as follows.

3.8.1 National Tuberculosis Control (TB) Programme (NTBCP)

In India, nearly 14 million people suffer from TB, and 2.2 million cases are added every year. Nearly 5 lakh deaths in our country are due to TB every year. The NTBCP was started in 1962 and it was revised in 1992 with the introduction of DOTS (Directly Observed Treatment with Short term chemotherapy) to overcome the problem of defaulters. Two important objectives are: (a) to cure at least 85 per cent of all new cases of TB, (b) to detect at least 70 per cent of total expected TB cases.

Strategies

- Early detection of symptoms (3 weeks cough, fever, weight loss)
- Sputum examinations (3 samples on the spot early morning)
- Drugs on alternate days in the presence of health persons in intensive phase for 1 month
- During the continuation phase, the first dose is taken by patient in the presence of health persons, and then, at home

3.8.2 National Anti Malaria Programme/National Programme

for Control of Vector Borne diseases

In India, nearly 2 million cases of malaria occur every year. The programme for control of malaria was started in 1953. The objective of this programme is to reduce the prevalence and deaths of malaria.

Strategies

- Involvement of local volunteers
- Medicated mosquito nets
- Training of health workers
- Inter sectoral coordination to prevent collection of water
- Epidemic management

3.8.3 National AIDS Control Programme

In India, nearly 3-5 million people are infected with the disease HIV virus. And there is a rising trend in all states. The national programme for control of AIDS was started in 1987. The objectives of this programme are (a) prevention of virus infection, (b) decreasing morbidity & mortality, and (c) minimize socio-economic impact.

Strategies

- IEC and Social mobilization
- Condom promotion
- Blood safety (ban on professional donors, HIV testing, licensing of blood banks, training)
- Surveillance through lab facilities in medical colleges
- Control of sexually transmitted diseases (STD)
- Clinical management (training of staff and provision of drugs)
- Care and support of cases through NGOs

3.9 NATIONAL HEALTH PROGRAMMES FOR CONTROL OF NON-COMMUNICABLE DISEASES

In the previous section, you read about the national health programmes launched by the Government of India for the control of communicable diseases. In this section, you will read about the national programmes launched for the control of non-communicable diseases.

3.9.1 National Programme for Control of Blindness (NPCB)

Of the total estimated 30 million blind persons in the world, 6 million are in India. Almost 80 per cent of this figure are blind due to cataract and 7.35 per cent due to refractive errors. The objectives of the NPCB programme is to reduce the prevalence rate of blindness.

Strategies

- Strengthening service delivery through health centres and hospitals
- Developing human resources for eye care by training health manpower
- Promoting outreach activities and public awareness by health education and mobile clinics
- Developing institutional capacity by providing equipment.

Infrastructure at tertiary level (state level)

- Opening Regional Institutes of Ophthalmology
- Up gradation of the Ophthalmology(Eye) departments of medical colleges
- Up gradation of the Ophthalmology(Eye) departments of medical colleges for training of Paramedical Ophthalmic Assistants
- Eye banks have been developed in government and non-government sector.

Infrastructure at saecondary level (District level)

Districts Hospitals have been equipped for ophthalmic services under NPCB. Through District Blindness Control Societies scheme has been extended to cover the entire country.

Infrastructure at primary level (village level)

There are central mobile units (attached to medical colleges) and district mobile units which make visit to villages for services. Primary health centres have been equipped with ophthalmic equipment and by posting para medical ophthalmic assistants.

3.9.2 National Iodine Deficiency Disorders Control Programme (IDD)

Iodine is a micronutrient which is required in the amount of 100-150 micro-grams daily for normal human growth and development. Its deficiency results in abortion, still-birth (dead born babies), mental retardation, deaf-mutes, squint, dwarfism, goitre in all ages, neuro-motor defects, etc. It is estimated about 200 million people in our country are at risk of developing IDD. In India it is estimated that 71 million people suffer from endemic goitre and other IDDs. The objectives of this programme is to elimination of IDD.

Strategies

- Use of iodized salt in place of common salt.
- Monitoring and surveillance for the cases
- IEC for health education.

3.9.3 National Programme for Mental health

The number of people affected by mental illness in India is estimated to vary from 18-20 per thousand population in various morbidity surveys, which is not less than that in developed countries. Mental health is not only related to relations between persons, but also to individuals' relations with community, social institutions, the ways of living, and working. The National Mental Health Programme was incorporated into the Central Scheme in 1982. The objectives of NPMH are (a) to ensure availability and accessibility of minimum mental health care for all in future, (b) to encourage applications of mental health knowledge in

general health care, (c) to promote community participation in mental health services.

Strategies

- Training of all workers in the mental health team at identified nodal institutions
- Health education to increase public awareness and to reduce social stigma
- Services for care of mentally ill patients in OPDs & indoors
- Collection of related data for future planning, monitoring & research.

3.9.4 National Cancer Control Programme

Cancer has become one of the ten leading causes of death in India. In India it is estimated that there are nearly 1.5 - 2 million cancer cases at any given point of time. 7 lakh new cases of cancer occur every year in India, and 3 lakh deaths occur annually due to cancer. The Government of India launched the National Cancer Control Programme in 1975- 76.

Objectives

- Primary prevention of cancers by health education regarding hazards of tobacco consumption and necessity of genital health for prevention of cervical cancer
- Secondary prevention, i.e., early detection and diagnosis cancers, for example, cancer of cervix, breast cancer and of the oro-pharynageal cancer by screening methods and patients' education on self examination methods.
- Strengthening of existing therapeutic services- palliative care in terminal cancers.

Strategies

- Development of oncology (cancer) departments in medical colleges/hospitals
- Scheme for district projects: accordingly, the scheme for district projects, preventive health education, and early detection and pain relief measures was started
- Financial assistance to voluntary organizations
- Cobalt therapy installation
- Development and dissemination of health education materials
- Procurement, supply and distribution of pain relief medicines
- Assistance for regional research and treatment centres
- National Cancer Registry Programme (NCRP) for keeping records of cancer patients.

3.9.5 National Diabetes Control Programme

Epidemiological studies show that 1 to 2 per cent prevalence of diabetes mellitus in India. An expert committee was constituted by the Government of India in 1986 to

formulate a national plan of action for the implementation of the National Diabetes Control Programme during the Seventh Five Year Plan.

Objectives

- Identification of high risk subjects at an early stage with a focus on primary prevention
- Early diagnosis of disease and institution of appropriate management so as to reduce morbidity and mortality
- Prevention, arrest, or slowing of complications of the disease
- Identification of subjects with partial or total physical handicaps and to ensure their rehabilitation.

Strategies

- Early identification and surveillance of the cases by health workers, doctors at PHC, CHC, and hospital specialists
- Case detection at the hospital level by specialists and trained manpower
- Monitoring and evaluation at the national level by the All India Institute of Medical Sciences, Department of Medicine.

In this section, you studied the national health programme for control of communicable diseases, the national health programmes for control of non communicable diseases. Now answer the questions given in Check Your Progress 2.

Check Your Progress 2

Note: a) Write your answer in about 50 words

b) Check your answer with possible answers given at the end of this unit

1) Name a few programmes for control of Communicable Diseases.

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2) List out some of the programmes for control of non-communicable diseases?

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3.10 OTHER NATIONAL HEALTH PROGRAMMES

Besides the specific programmes launched for the control of communicable and non communicable diseases, the Government of India has also launched a programme for the control of diseases and to raise health standards of people.

3.10.1 National Rural Health Mission (2005-2012)

Recognizing the importance of health in the process of economic and social development and improving the quality of life and in order to follow a synergistic approach by relating health to determinants of good health viz. segments of nutrition, sanitation, hygiene and safe drinking water, the Government of India launched the national Rural Health Mission in 2005.

The thrust of this mission is to improve the availability of and access to quality health care by people, especially for those residing in rural areas, the poor, women and children.

Objectives

- Provide a female health activist in each village(ASHA)
- Village health plan prepared through a local team headed by the Health & Sanitation Committee of the Panchayat
- Strengthen rural hospitals for effective curative care and making it accountable to the community through Indian Public Health Standards (IPHS)
- Integration of vertical health and family welfare programmes and funds for optimal utilization of funds and infrastructure
- Strengthening delivery of primary healthcare
- Mainstream AYUSH into the public health system
- Integrate health concerns with determinants of health like sanitation and hygiene, nutrition, and safe drinking water through a District Plan for Health
- Decentralization of programmes for district management of health
- Address the inter-state and inter-district disparities
- Time-bound goals and report publicly on their progress
- Improve access of rural people, especially poor women and children, to equitable, affordable, accountable, and effective primary healthcare.

Strategies

- Train and enhance capacity of Panchayati Raj Institutions (PRIs) to own, control and manage public health services.
- Promote access to improved healthcare at household level through the female health activist (ASHA).
- Health Plan for each village through Village Health Committee of the Panchayat.
- Strengthening sub-centre through an untied fund to enable local planning and action and more Multi Purpose Workers (MPWs).
- Strengthening existing Primary Health Centers (PHCs) and Community Health

Centre (CHCs), and provision of 30-50 bedded CHC per lakh population. Preparation and Implementation of an inter-sectoral District Health Plan prepared by the District Health Mission, including drinking water, sanitation & hygiene and nutrition.

- Integrating vertical Health and Family Welfare programmes at National, State, Block, and District levels.
- Technical Support to National, State and District Health Missions, for Public Health Management.
- Strengthening capacities for data collection, assessment and review for evidence based planning, monitoring and supervision.
- Formulation of transparent policies for development of human resources for health.
- Developing capacities for preventive health care at all levels.

3.10.2 Reproductive and Child Health (RCH) Programme

This programme has been launched in India on 15th October 1997 to provide integrated reproductive & child health care. The objectives of this programme are to meet all the felt needs for contraception, and to reduce the infant and maternal morbidity and mortality, so that there is reduction in the desired level of fertility.

Strategies

- Community participation in planning for services and prioritizing
- Client centred approach to service provision
- Upgraded facilities and improved training
- Emphasis on good quality care
- Absence of contraceptive targets and incentives
- Making services gender sensitive
- Multi sectoral approach in implementing and monitoring services.
- Components of RCH Programme.

Broad areas under this programme divided in to five categories given below.

i) **Maternal Health:** Services for mothers during pregnancy, child birth and post-natal period including safe abortion services when required.

ii) **Child Health:** Services for children including newborn care, immunization, vitamin A prophylaxis, oral rehydration therapy (ORT) for diarrhoea, management of acute respiratory infections (ARI), anaemia control, etc.

iii) **Prevention and Management of Unwanted Pregnancy:** Services for eligible couples through promotion of use of contraceptive methods as well as infertility services when required.

iv) **Prevention and Management of Reproductive Tract:** Infections (RTIs), services for early detection, investigation and treatment.

v) **Adolescent Health:** Adolescent health services including counselling on family life and reproductive health.

3.10.3 Integrated Child Development Services Programme (ICDS)

Integrated Child Development Services (ICDS) is the largest national programme for mother and child development in the world. The Planning Commission and a National Policy for Children constituted inter-ministerial study teams in 1970. The recommendations made by these teams were adopted by the Government of India in 1974, and a blueprint for ICDS was drawn up by the Ministry of Social Welfare. The beneficiaries are children below 6 years, pregnant and lactating mothers and women in the age group of 15 to 44 years.

Objectives: The five objectives of these schemes are listed below.

- To improve the nutritional and health status of children in the age group of 0-6 years
- To lay the foundations for proper psychological, physical and social development of the child
- To reduce the incidence of mortality, morbidity, malnutrition and school drop-out
- To achieve effective co-ordination of policy and implementation amongst the various departments to promote child development
- To enhance the capability of the mother to look after the normal health and nutritional needs of the child through proper nutrition and health education.

Package of services

All the ICDS services are provided through a village based centre, the anganwadi centre (AWC), in an integrated manner to enhance their impact on mothers and children. Each AWC is run by an anganwadi worker (AWW) supported by a helper. Each AWC caters to a population of approximately 1,000 in rural and urban areas and 700 in tribal areas. The following services are provided under the programmes.

i) **Supplementary nutrition-** This includes supplementary feeding, prophylaxis against vitamin A deficiency and control of nutritional anaemia. All families in the anganwadi area are surveyed, to identify low income families and deprived children below the age of six years, pregnant and nursing mothers and adolescent girls. They avail the facility of supplementary feeding support for 300 days in a year. The feeding is aimed only at supplementing and not substituting for family food. The type of food varies from state to state but usually consists of a hot meal cooked at the *anganwadi*, containing a combination of pulses, cereals, oil, vegetables, and sugar. Some states provide a ready to eat meal containing the same basic ingredients. There is flexibility in the selection of food items to respond to local needs. The expenditure towards supplementary feeding is met by the state under the plan budget, available for minimum needs

ii) **Immunization-** Immunization of pregnant women against tetanus and immunization of infants against six vaccine preventable diseases poliomyelitis, diphtheria,

pertussis, tetanus, tuberculosis and measles is provided to children. PHC and its infrastructure carry out immunization of infants and expectant mothers as per the national immunization schedule. The AWW assists the health functionaries in coverage of the target population for immunization. She helps in the organization of fixed day immunization session. She maintains immunization records of ICDS beneficiaries and follows up to ensure full coverage.

iii) **Health Check-Ups-** This includes healthcare of children under six years of age, ante natal care of expectant mothers, and post-natal care of nursing mothers. The health services provided for children by AWWs and PHC staff includes regular health check-ups, recording of weight, immunization, management of malnutrition, treatment of diarrhoea, deforming and distribution of simple medicines, etc. At the *anganwadi*, children, adolescent girls, pregnant women and nursing mothers are examined at regular intervals by the lady health visitor (LHV) and auxiliary nurse midwife (ANM) who also diagnose minor ailments and distribute simple medicines.

iv) **Referral Services-** During health checkups and growth monitoring, sick or malnourished children in need of medical attention are provided referral services through ICDS. The AWW has also been oriented to detect disabilities in young children. She lists all such cases in a special register and refers them to the medical officer.

v) **Growth Monitoring and Promotion-** Growth monitoring and nutrition surveillance are two important activities in ICDS. Both are important for assessing the impact of the health and nutrition related services. Children below the age of three years are weighed once a month and children from three to six years are weighed quarterly. Fixed day immunization sessions, or, days when mothers come to take home rations for younger children are used as opportunities for growth monitoring for all children below six years. Growth is charted both to detect growth faltering and to assess their nutritional status. Identified severely malnourished children are given special, therapeutic supplementary food or just double ration, and are also referred to medical services.

vi) **Nutrition and Health Education-** Nutrition, Health and Education (NHED) are a key element of the work of the *anganwadi* worker. This is aimed at the capacity building of women especially in the age group of 15-44 years so that they can look after their own health and nutrition needs as well as those of their children and families. All women in this age group are expected to be covered by this component. The components of NHED comprise basic health and nutrition messages, related to childcare, infant feeding practices, utilization of health services, family planning, and environmental sanitation. NHED is imparted through sessions, home visits and demonstrations.

vii) **Early Childhood Care and Pre-school Education (ECCE)**-The Early Childhood Care and Pre-school Education component of the ICDS is considered the backbone of the ICDS programme. ECCE focuses on the total development of the child up to six years. It includes promotion of early stimulation of the under threes through intervention with mothers.

viii) **Adolescent Girls Scheme**-For the first time in India a special intervention has been devised for adolescent girls, using the ICDS infrastructure. This

intervention focuses on school dropout girls in the age groups of 11-18 years, to meet their needs of self development, nutrition health education, recreation, literacy, and skill formation.

In this section, you studied about other national health programmes, reproductive and child health programme, integrated child development services programme. Now answer the questions in check your progress 3.

Check Your Progress 3

Note: a) Write your answer in about 50 words.

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

1) What is the Reproductive and Child Health Programme?

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2) What do you understand by ICDS?

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3.11 LET US SUM UP

Broadly, there are two classification of diseases- one is communicable diseases and other is non-communicable diseases. Communicable diseases are those which can spread from one person to another person and are caused by a disease agent such as parasites or micro organisms. Non-communicable diseases are those which cannot spread from one infected person to another and are due to dietary deficiencies, life style disorders, behaviour disorder, stress, lack of exercise, occupational stress, etc.

The common diseases among children are – malnutrition resulting in inadequate weight and height as per their age, vitamin A & D deficiency leading to night blindness and rickets respectively, diarrhoea, infections of respiratory system, ear and eye infections, worm infestations, skin infections, measles, whooping cough, and poliomyelitis.

The common problems and diseases among adolescents are- mainly from accidents, violence, pregnancy related problems or illnesses that are either preventable or treatable. The HIV/AIDS pandemic alone is sufficient reason to look anew at how health services address the needs of adolescents. Many diseases of late middle age, such as lung cancer, bronchitis, and heart disease, are strongly associated with a smoking habit that begins in adolescence. Common diseases in women are anaemia due to deficiency

of iron and vitamin B-complex, under-nutrition due to inadequate intake of food. Some of the important causes of maternal mortality are sepsis,(Infections), haemorrhage (bleeding), toxaemia, and malnutrition.

Common disease in old age are cataract (whiteness in the lens of the eye), increasing in pressure in the eye resulting in difficulty in vision (glaucoma), deafness (due to nerve degeneration), softening of bones (osteoporosis) , difficulty in breathing, changes in mental out look and decrease in the perception of senses. The degenerative diseases of blood vessels and heart, cancer, are also common in old age due to softening of bones, diabetes, diseases of the joints resulting in difficulty in walking, diseases of the respiratory system such asthma, infections, and difficulty in passing urine, urinary tract infections, etc. In addition, mental changes result in impaired memory, rigidity of outlook, dislike for change, and emotional disorders from social maladjustment. The goals of medicine are to promote health, preserve health and to restore health when it is impaired and to minimize suffering and disability resulting from diseases.

3.12 REFERENCES AND SELECTED READINGS

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3.13 CHECK YOUR PROGRESS: POSSIBLE ANSWERS

Check Your Progress 1

1) Mention a few common diseases among Adolescents.

   Ans. A few common diseases among adolescents are: pregnancy related problems or illnesses. Some of the highest infection rates for sexually transmitted infections are among adolescents. HIV/AIDS is very high among adolescents.

2) What are the common diseases among old persons?

   Ans . Common diseases among old persons are :such as cataract (whiteness in the lens of the eye), increasing in pressure in the eye resulting in difficulty in vision (glaucoma), deafness (due to nerve degeneration), softening of bones (osteoporosis), difficulty in breathing, changes in mental outlook and decrease in the perception of senses.

Check Your Progress 2

1) Name a few programmes for control of communicable diseases and their objectives?

   Ans. There are many national programmes for control of communicable diseases like tuberculosis, malaria, iodine deficiency, cancer control, diabetes control, reproductive and child health etc. The objectives National

Tuberculosis Control Programme (NTBCP) are to cure at least 85 per cent of all new cases of TB and detect at least 70 per cent of total expected TB cases. Similarly, National Anti Malaria Programme/ National Programme for Control of Vector Borne Diseases the thrust has given to reduce the prevalence of malaria.

2) List out some of the programmes for control of non-communicable diseases?

Ans. Some popular national programmes for control of non-communicable diseases are- National Programme for Control of Blindness, National Programme for Mental health, National Cancer Control Programme, National Diabetes Control Programme.

Check Your Progress 3

1) What is the reproductive and child health programme?

Ans. In India, this program has launched on 15th October 1997 with the aim of providing integrated reproductive and child health care. Two major objectives are to meet all the felt needs for contraception and reduce the infant and maternal morbidity and mortality, so that there is reduction in the desired level of fertility.

2) What do you understand by ICDS?

Ans. Integrated Child Development Services (ICDS) is the largest national programme for mother and child development in the world. The objectives of this programme are (a) to improve the nutritional and health status of children in the age group of 0-6 years; (b) to lay the foundations for proper psychological, physical and social development of the child; and (c) to reduce the incidence of mortality, morbidity, malnutrition and school drop-out.