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**PG AND RESEARCH DEPARTMENT OF FOODS AND NUTRITION**

**CLASS : III.B.SC NUTRITION FSM & DIETETICS**

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**SUBJECT NAME : COMMUNITY NUTRITION**

**SYLLABUS**

**UNIT - IV**

Nutrition policy and programmes - National Nutrition policy - need for nutrition policy, policy strategies and their implementation - ICDS, Noon Meal Programme, FAO, WHO, UNICEF, CARE, ICMR, ICAR, CSIR, NIN, CFTRI,NGOs, National Nutrition Surveillance system, National prophylaxis programmes for IDA,VAD and IDD,.

From our discussion above it must be clear that we have few organizations in our country, which provide a more systematic approach in collection and compilation of health and nutrition data. Before we proceed to the next topic, let us check what we have learnt so far by answering the check your progress exercise given herewith.

**Check Your Progress Exercise 1**

1. What is nutrition monitoring?  
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2. List the main objectives of nutrition monitoring.  
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3. List the four notable organizations/systems involved with nutrition monitoring in our country.  
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4. List the objectives and unique features of National Nutrition Monitoring Bureau.  
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Now, we move on to the next topic i.e. nutrition surveillance system.

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### **9.3 NUTRITION SURVEILLANCE SYSTEM (NSS)**

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Earlier in this unit we studied about nutrition monitoring. Nutrition monitoring you would realize is usually an integral part of nutrition surveillance. Quite often, the terms “nutrition surveillance” and “nutrition monitoring” as mentioned earlier too are used synonymously. What then is nutrition surveillance? *Nutrition surveillance means watching over nutrition in order to make decisions, which will lead to improvement of nutritional status of population.*

*Nutrition surveillance is a continuous and systematic process of collection, analysis, interpretation of information to assess nutritional status and initiate appropriate early action to promote optimal nutrition.*

Nutrition monitoring is usually an integral part of nutrition surveillance and you already know, it refers to “repeated measurements of the nutritional status, at regular intervals of population or a specific group of individuals over a period of time. ‘Surveillance’, on the contrary, is concerned with data on the current status/ activities at local levels for initiating action in response to events occurring during specific programme implementation in the population. Nutrition surveillance, therefore, encompasses analysis and action to promote better health and nutrition.

While studying about nutrition surveillance it is important for us to familiarize ourselves with a term “Triple A Cycle”. What is Triple A? Let’s find out. Triple A means Assessment, Analysis and Action. Nutrition Surveillance is carried out adopting triple A Cycle as indicated in Figure 9.1 herewith



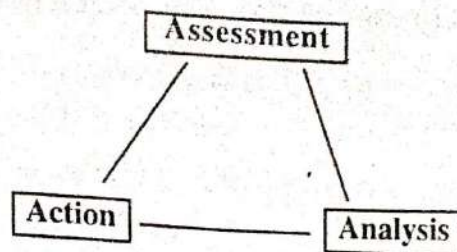


Figure 9.1: The Triple A cycle

The first step in the cycle is *assessment* of the nutritional status of an individual, which is followed by *analysis* of the causes for deterioration in nutritional status. For example, the reasons could be delayed complementary feeding, inadequate dietary intake, frequent attacks of morbidity and non-utilization of services provided by the government etc. The health and nutrition workers should carefully enquire the reasons at the household level and initiate suitable *action*, which is the next step in nutrition surveillance. The action may be education of the mother about initiation of complementary feeding by the age of 6 months or frequent feeding of energy rich foods or controlling morbidity. The triple A cycle is not one time activity but a continuous process.

Having understood the concept of nutrition surveillance, let us now look at the objectives and uses of nutrition surveillance. We will also discuss what infrastructure could be used to establish NSS in the country. At the end, we would discuss the key indicators and the importance of computerization in carrying out effective nutrition surveillance.

Let us now begin with the objectives of nutrition surveillance.

### 9.3.1 Objectives of Nutrition Surveillance

The main aim of nutrition surveillance is *early identification of at risk groups of population like children and mothers so as to institute appropriate interventions/ actions to prevent undernutrition*. Thus, objectives of effective nutrition surveillance are:

1. It should identify the prevalent nutrition-related problems and the high-risk groups.
2. The information collected in NSS should prompt initiation of appropriate intervention programmes to prevent the occurrence of nutritional disorders. Surveillance should never exist in isolation from action.
3. It also should provide information on nutrition and health of communities to help in the preparation of action plans at different levels.
4. It should assist in the management and evaluation of health and nutrition related programmes.
5. The nutrition surveillance should also be able to provide timely warning about impending nutrition disasters.

Next, let us look at the uses of nutrition surveillance.

### 9.3.2 Uses of Nutrition Surveillance System

Nutrition surveillance system can have various uses. Some of the important uses include:

1. The most important contribution of NSS is to help in early diagnosis, initiating of prompt and immediate remedial measures to control undernutrition and thus promote the nutritional status.
2. The NSS provides information on the current nutritional status, the geographic distribution of nutrition problems (identification of geographic areas), causes and changes in the prevalence/incidence over time, the actions initiated and their effects.



3. The NSS can help to identify the seasons of nutritional stress.
4. The NSS can also be used for performance evaluation of the ongoing intervention programmes and assessment of contributory factors.
5. It can help the administration in prioritizing actions, so as to modify policies and programmes from time to time.
6. The NSS can provide information on nutritional trends over a period of time and help in establishing a database on nutrition and related indicators to enable assessment, constantly, of the extent of achievement of the national nutritional goals.

We learnt about the objectives and uses of nutrition surveillance system. Let us now study how we can institutionalize NSS i.e. what kind of infrastructure do we need for NSS.

### 9.3.3 Infrastructure for Nutrition Surveillance System

The important step in the establishment of national NSS is identification of suitable infrastructure. It would be preferred that we use an existing infrastructure rather than establishing a new set up. In India, Integrated Child Development Services (ICDS) is one of the largest nation-wide child development programmes. What is ICDS? You will learn about it in detail in Unit 10. We will discuss here how it could be used to develop NSS.

ICDS is best suited for developing NSS at the national level for the following reasons:

1. It is currently in operation in most of the community development blocks in the country and, as per the National Nutrition Policy (NNP) it will be expanded to the entire rural and 50% of the urban areas of the country.
2. It has the necessary infrastructure and trained manpower with a built-in management information system from the village level up to the national level.
3. Growth monitoring, an important requisite to find out the nutritional status of children is an integral part of ICDS. All the nutrition goals set by the NNP are covered by the ICDS activities.
4. More importantly, ICDS has a built in monthly progress reporting (MPR) system, which could be an important tool for NSS.

What is Monthly Progress Reporting (MPR) system? Let us find out more about it.

#### *Monthly Progress Reporting (MPR) system*

At present, Anganwadi Workers (AWW) at the anganwadi centre (village) level monitor the ICDS scheme through a system of monthly progress reports (MPR). The Supervisors and the Child Development Project Officers (CDPOs) consolidate these MPRs. These contain mostly quantitative information on the coverage under different components of ICDS (Process variables). For effective NSS, there should be a provision to identify, at different levels, "children at-risk" or "problem areas" so that corrective action could be immediately initiated. Information should be collected about the reasons for low coverage for various nutrition programmes like supplementary feeding programme, semi-annual distribution of massive dose of vitamin A, nutritional anaemia control programme, universal immunization programme etc. The information so collected should help the workers in taking immediate action. Critical review of the MPRs is essential at various levels i.e. village to the level of State, to improve the performance of the programmes.

In addition to ICDS, the Department of Health, which has extensive infrastructure in the rural areas, can also be considered as the delivery mechanism for nutrition



surveillance. In fact, the nutrition surveillance should be a combined approach both by the Health and ICDS departments.

Thus, we saw how we could use the existing infrastructure for establishing NSS. Now let us review the key indicators, which would be critical for a successful nutrition surveillance programme.

### 9.3.4 Key Indicators of Successful Nutrition Surveillance Programme

ICDS and Health department do collect information on several health and nutrition indicators. However, we would mention here some key indicators which are critical for a successful nutrition surveillance programme. These are:

- Enrolment and attendance of different beneficiaries for supplementary nutrition and preschool education,
- Nutritional status of children and its trends,
- Growth faltering among children,
- Prevalence of nutritional deficiency signs like oedema (kwashiorkor), wasting (marasmus), Bitot spots, night blindness and visible goitre.
- Coverage under national programmes namely:
  - a. Immunization of children and expectant women,
  - b. Vitamin 'A' distribution to children,
  - c. Distribution of IFA tablets to children, pregnant woman and lactating women.
- Prevalence of low birth weight,
- Vital rates in different age and physiological groups, and
- Prevalence of common morbidity in children and causes for deaths.

Thus, the indicators given above could provide necessary information on nutritional status and coverage of target population in nutrition and health intervention programmes. You probably know that computerization, like in any other programme, could help in efficient delivery of NSS. Let us now study how could computerization help in efficient delivery of NSS.

### 9.3.5 Computerization for Monitoring and Surveillance

The success of any surveillance programme depends on the regularity of submission of the reports, assessment of their completeness and correctness and reviewing the reports for further action. Manual compilation and consolidation of the data from different AWCs/Sectors/Projects on a continuous basis is often time consuming, and is liable to errors. Hence, a simple, user-friendly, computer software can be developed to enable the concerned personnel at each project level to enter the surveillance data on Personal Computers (PC) and obtain the necessary reports for assessing the actual status and initiating appropriate action at every level. If the existing NICNET services are utilized, the surveillance reports can be made available for decision making to all the developmental agencies and the office of the District Collector. The district authorities can also utilize the information for preparation of action plan for nutrition, and for targeting and reviewing the developmental programmes. The software programme will also help in the performance appraisal and remedial administrative measures. It also helps to present the data in a graphic form for easy comprehension. A feedback mechanism would motivate the ICDS functionaries at different levels and facilitate initiation of appropriate action without any time delay. There is another important thing you have to remember is that the quality of the data collected by different workers should be ensured. Therefore, all the workers involved should be adequately trained in filling and interpretation of the MPRs and health-related information. While all the fresh recruits could be trained at the induction



unemployment and malnutrition, became a national priority. Various intervention programmes have been launched by the government, to improve the provision of basic services to the poor and to devise a security system, through which the most vulnerable section, viz. women and children, could be protected. These programmes are discussed in this unit.

In 1993, the GOI adopted the National Nutrition Policy (NNP), in recognition of the magnitude of under nutrition in the country. The salient feature of the NNP is the other major focus in this unit.

### Objectives

After studying this unit you will be able to:

- describe the national nutrition policy,
- enlist the various nutrition intervention programmes launched by the Government, and
- discuss the major features of the nutrition intervention programmes.

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## 10.2 NATIONAL NUTRITION POLICY (NNP)

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The National Nutrition Policy, formulated by the Department of Women and Child Development, Government of India (GOI) was approved by the Cabinet in April 1993 and tabled in both houses of the parliament in August 1993. The policy advocates a “comprehensive, integrated and inter-sectoral strategy for alleviating the multifaceted problem of malnutrition and achieving the optimal state of nutrition for the people”. The National Plan of Action on Nutrition (NPAN) was released in 1995 to implement the National Nutrition Policy, which included strategies specifically to address the prevention and control of micronutrient deficiencies.

Let us now review the important aspects of the NNP. These include: a) Aims of NNP, b) Nutrition Policy Instruments, and c) Policy implementation. We shall begin with the aims of NNP.

### 10.2.1 Aims of the National Nutrition Policy

The NNP is based on the conviction that reduction in malnutrition and improvement in nutritional status of the people will contribute significantly to development of human resources and the overall economic and social goals of the country.

The main aims of the NNP are:

- to draw attention to the urgent need to reduce malnutrition in the country,
- to highlight the need for inter-sectoral coordination to achieve nutritional goals,
- to orient relevant sectors to perceive nutrition as an outcome of their sectoral activities, and
- to identify short term, intermediate and long-term strategies for achieving nutritional goals either through direct policy changes or indirect institutional or structural changes.

Next, let us get to know what nutrition policy instruments have been advocated for achieving these above listed aims.

### 10.2.2 Nutrition Policy Instruments

Realizing the fact that nutrition is a multi-sectoral issue and needs to be tackled at various levels, the nutrition policy instruments focused on tackling the problem of nutrition both through nutrition interventions, for especially vulnerable groups, as well as, through various development policy instruments that will create conditions for improved nutrition. A direct intervention (short term strategy) and an indirect policy instrument through long term institutional and structural changes were advocated.



Let us then look at the nutrition policy instruments highlighting short and long-term measures.

### A. *Direct Short Term Intervention*

The short-term measures focus on the following strategies:

1. Nutrition intervention for specially vulnerable groups by a) expanding the nutrition intervention net through Integrated Child Development Services (ICDS) so as to cover all vulnerable children in the age group 0-6 years b) Improving growth monitoring between the age group 0-3 years in particular, with closer involvement of the mothers, in a key intervention c) Reaching the adolescent girls through the ICDS so that they are made ready for a safe motherhood, their nutritional status is improved and they are given some skill up-gradation training in home-based skills and covered by non-formal education, particularly nutrition and health education, and d) Ensuring better coverage of expectant mothers, such coverage to include supplementary nutrition starting from first trimester of pregnancy to the first year after pregnancy.
2. Fortification of essential foods, for example, salt with iodine and/or iron.
3. Production and popularization of low cost nutritious foods from indigenous and locally available raw material, by involving women in this activity.
4. Control of micronutrient deficiencies among vulnerable groups - deficiencies of vitamin A, iron, folic acid and iodine among children, pregnant women and nursing mothers.

Next, let us look at the indirect policy instruments.

### B. *Indirect Policy Instruments*

The long term strategies for achieving the national goals through indirect institutional or structural changes includes:

- i) Ensuring food security, a per capita availability of 215kg/person/year of food grains.
- ii) Improvement in the dietary patterns by promoting the production and increasing the per capita availability of nutritionally rich foods.
- iii) Policies for effective income transfers so as to improve the entitlement package of the rural and urban poor by re-orienting and restructuring the poverty alleviation programmes (like Integrated Rural Development Programme) and employment generation schemes (like Jawahar Rozgar Yojna etc) to make a forceful dent on the purchasing power of the lowest economic segments of the population and by ensuring an equitable food distribution, through the expansion of the public distribution system (PDS).
- iv) Implementing land reforms.
- v) Health and Family Welfare.
- vi) Basic nutrition and health knowledge, with special focus on wholesome infant feeding practices.
- vii) Prevention of food adulteration, by strengthening/gearing up the enforcement machinery.
- viii) Nutrition surveillance.
- ix) Monitoring of nutrition programmes.
- x) Communication through established media for effective implementation of the nutrition policy.

- xi) Ensuring an effective, minimum wage administration.



- xii) Community participation, by involving the community through their panchayats / beneficiary committees or through actual participation, particularly of women, by promoting schemes relating to kitchen gardens, food preservation etc. and generation of effective demand at the level of the community for all services relating to nutrition.
- xiii) Education and literacy, and
- xiv) Improvement of the status of women.

The policy states that the measures enumerated above are to be administered through inter-sectoral coordination and activities. Next, we will look at how the National Nutrition Policy is being implemented.

### 10.2.3 National Policy Implementation

The nodal responsibility at the central level for policy implementation rests with the Ministry of Human Resource Development under the chairmanship of Secretary, Department of Women and Child Development. Sectoral Ministeries/Departments concerned like Agriculture, Food, Civil Supplies, Health and Family Welfare, Rural Development, Education and Environment, whose role is crucial for sustainable improvement in nutritional status of the population, are represented on the *Inter-Ministerial Coordination Committee*. A *National Nutrition Council* is constituted in the Planning Commission with the Prime Minister as its President and concerned Union Ministers, a few State Ministers by rotation, and experts, representatives of non-governmental organizations and gra'ss root leaders (especially women) as its members. Further, the effective implementation of the NNP is dependent to a large extent on the State Governments/Union Territory Administrations and the constitution of State Nutrition Councils.

From the discussion above it must be evident that we have a very comprehensive national nutrition policy in place, which addresses malnutrition through multi-sectoral approach. In the next section, we will discuss the nutrition intervention programmes designed and implemented by government of India. But first let us recapitulate what we have learnt so far.

#### Check Your Progress Exercise 1

1. List the main aims of National Nutrition Policy.  
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2. List any two direct short-term interventions and two indirect policy instruments of National Nutrition Policy.  
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3. NNP is implemented through a multi-sectoral approach. Elaborate.  
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Now that we are aware about the Nutrition Policy, let us get to know about the nutrition programmes being run by the government to combat malnutrition.



## 10.3 NUTRITION PROGRAMMES

The National Nutrition Policy, about which we have studied above, was formulated only in 1993. However, prior to that, since the last four decades, Government has launched a variety of nutrition intervention programmes to combat malnutrition. One of the first nutrition programmes launched by the government was the Applied Nutrition Programme (ANP), way back in 1963. Thereafter, numerous programmes have been launched. Some of these programmes are in operation and some are not. Some new programmes focusing on ensuring food security for all and employment-based programmes have also been initiated by the government. We will now study about all these programmes. We will divide these programmes into the following sections.

- Integrated Child Development Services Programme (ICDS), which remains one of the world's most unique community based, outreach programme for early childhood care and development.
- Nutrient Deficiency Control Programmes, namely National Prophylaxis Programme for Prevention of Blindness due to Vitamin A deficiency, National Anaemia Control Programme, National Iodine Deficiency Disorder (IDD) Control Programme.
- Food Supplementation Programmes, like the Special Nutrition Programme (SNP), Balwadi Feeding Programme, Composite Nutrition Programme and Applied Nutrition Programmes.
- Food Security Programmes, namely Public Distribution System (PDS), Antodaya Anna Yojna, Annapurna Scheme, National Food for Work Programme, and
- Self Employment and Wage Employment Schemes, namely Sampoorna Gramin Rojgar Yojana, Swarna Jayanti Gram Swarozgar Yojana

We shall begin our exhaustive study of these programmes with a discussion on the ICDS programme.

## 10.4 INTEGRATED CHILD DEVELOPMENT SERVICES (ICDS) PROGRAMME

The Integrated Child Development Services is the world's most unique welfare programme, which holistically addresses health, nutrition and development needs of young children, adolescent girls and pregnant/nursing mothers across the life cycle. Launched by the Government of India in 1975-76, in 33 blocks, today, it has expanded to 4348 community development blocks (to target 5652 blocks upon expansion), reaching out to 26.85 million young children, 5.07 lakh adolescent girls and 5.3 million pregnant/nursing mothers, through a network of over 5 lakh Anganwadi Centres and more than 1 lakh mahila mandals.

ICDS contributes not only to the achievement of women and child goals related to health, nutrition and early child development, but also to other primary health care goals and the goals of universal elementary education, as enunciated in the National Plan of Action for Children 1992. Integration of services and consideration of the mother and child as one 'biological unit' are the unique features of this programme. We will look at the 1) objectives, 2) target groups, 3) programme components and, 4) implementation of ICDS. Let us begin with the objectives.

### 1) Objectives of the ICDS

The ICDS scheme aims at the holistic development of children in the age group of 0-6 years, nursing and pregnant mothers belonging to the most deprived sections of the society. The specific objectives of the ICDS are to:

- improve the nutritional and health status of children in the age group of 0-6 years and adolescents,
- lay the foundation for proper psychological, physical and social development of the child,



- reduce the incidence of mortality, morbidity, malnutrition and school drop-out,
- achieve effective coordination of policy and implementation amongst the various departments to promote child development, and
- enhance the capability of the mother to look after the health and nutritional needs of the child through proper nutrition and health education.

Let us look at type of population who receives the benefits of the programme. i.e. the target groups.

2) *Target Groups*

The main beneficiaries of the ICDS programme are:

- Infants
- Children 1-6 years of age
- Pregnant and Lactating women
- Adolescent Girls, and
- All women up to 45 years of age.

We will now review the services provided or the components of the ICDS.

3) *Programme Components*

ICDS programme is a package of several services. The services offered by the programme include:

- Supplementary nutrition
- Immunization
- Periodic health check-ups, treatment of minor ailments and referral services
- Growth monitoring
- Non-formal preschool education
- Health and nutrition education
- Adolescent girls scheme
- Safe drinking water

Let us look at each of these services in detail now. Figure 10.1 highlights the target group and programme component of ICDS.

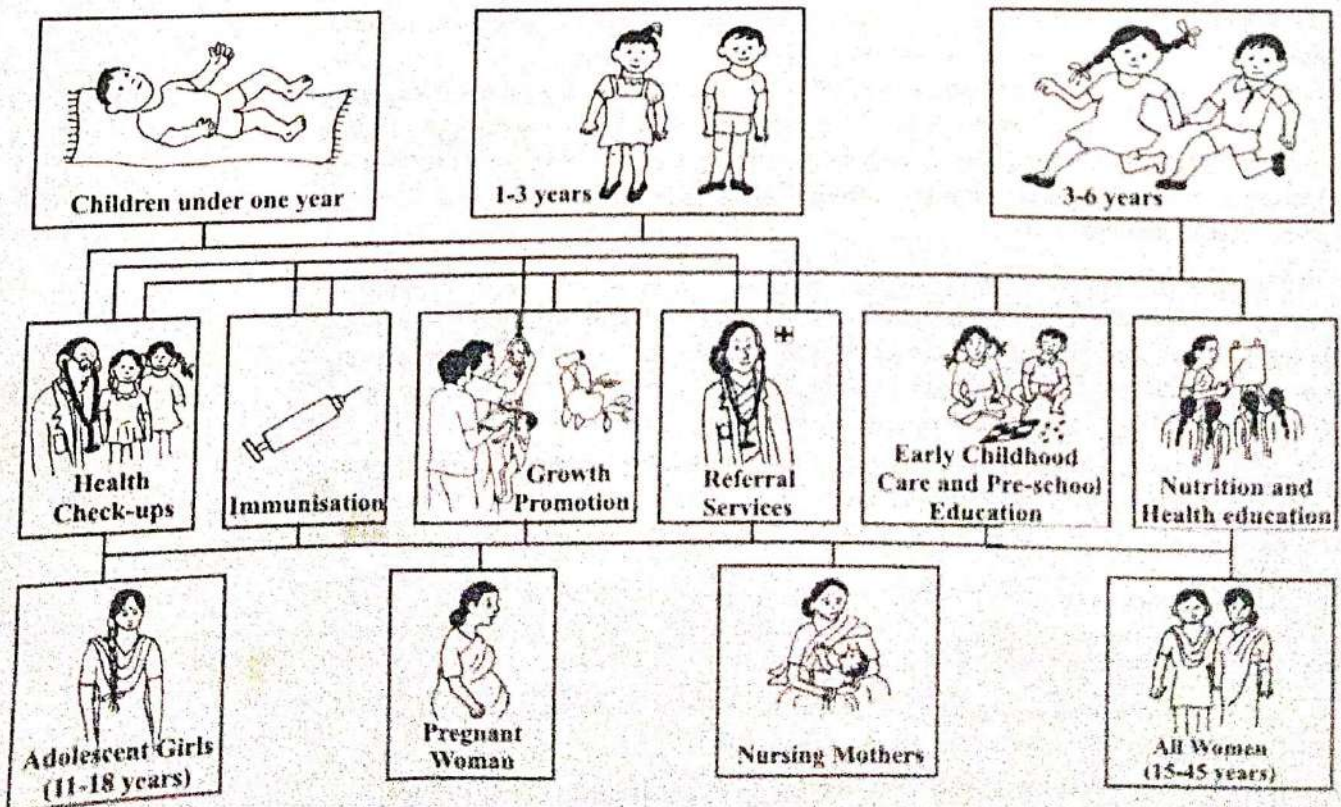


Figure 10.1 : ICDS : target groups and components.



- *Supplementary Nutrition:* The ICDS Scheme has been recognized as the strongest and most viable vehicle for improving nutritional status. In Unit 12, we will look at the supplementary feeding component of ICDS. We will briefly describe it here. As discussed earlier, the problem of under nutrition has been mainly addressed through the services like supplementary feeding within the ICDS. The beneficiaries for supplementary nutrition are children below 6 years, pregnant and lactating women. As per existing guideline, the feeding is supplemental to meet calorie/protein gap of 300 Kcal, 8-10 g of proteins for Grade I and Grade II malnourished children and double the amount for Grade III and Grade IV children. In some ICDS projects 'take home ration strategy' (THRS) is already functioning. Food for 1-4 weeks is distributed at a time to mothers for feeding at home. As per existing norms, the cost involved in supplementary nutrition component of children is indicated at Rs. 1 per day per beneficiary.

A new initiative in the form of Pradhan Mantri Gramodaya Yojana (PMGY) has been introduced during financial year 2000-2001. The PMGY envisages allocation for Additional Central Assistance to States/UTs for selected Basic Minimum Services including nutrition. The nutrition component of PMGY has been specifically outlined with the objective of eradicating malnutrition amongst under-three year children by increased nutritional coverage of supplementary feeding of these children through the ICDS scheme.

For pregnant and nursing mothers, the feeding is supplemental to meet calorie/protein gap of 500 Kcal, 20-25 g proteins. A meal similar to that received by pregnant and lactating mother is being provided to adolescent girls providing 500 Kcal and 20-25g proteins on all six working days of the week. A variety of foods are used in the feeding programmes. A few examples include; fruit bread/muruku/ sev/biscuits etc.

- *Immunization:* Immunization plays a crucial role in preventing serious childhood diseases. All infants and children are covered by the ICDS and immunized against infectious diseases such as diphtheria, whooping cough, tetanus, poliomyelitis, tuberculosis etc. Measles vaccinations are also provided. All pregnant women are immunized against tetanus.
- *Health check-up and referral services:* As a vital input to provide the essential services of health check-up and referral services, each anganwadi center is provided every year with a medicine kit consisting of easy to use and dispensable medicines to remedy common ailments like cough and common cold, skin infections etc. If the ailment requires specialized treatment the case is referred to the nearest health system. Children, adolescent, nursing/pregnant women are examined and treated at regular intervals by the local health personnel, such as the Lady Health Visitor (LHV) and Auxillary Nurse Midwife (ANM). They provide a link between the village and the Primary Health Centre and sub-centres.
- *Growth Monitoring:* In the context of the ICDS, growth monitoring is a tool for preventing malnutrition and for early detection of growth faltering. Weight is easy to measure and interpret hence it is used in the Anganwadi as a measure to watch the progress of the child's health/nutritional status. Proper record is maintained in the Anganwadi in the growth chart known as Weight-for-age charts. The chart consist of a card presenting in graphic form the weight-for-age curves drawn across. Each curve denotes a particular level of nutrition/growth status. A sample growth chart you may recall has already been appended in Unit 7 on page 153. The growth charts once plotted are useful to Anganwadi worker/mothers to quickly identify signs of malnutrition and take prompt action. Using the chart, the mothers could be educated regarding: i) the child's weight, ii) dietary requirements, iii) right kind of food preparations/demonstration of cooking and feeding to meet the special needs of the children, and iv) quantity and frequency of feeding.



A new initiative has been taken for growth monitoring of all children less than three years along with other children.

- *Early Childhood and Preschool Education:* The preschool education component under the ICDS is a crucial component of the package of services envisaged under the scheme. It aims at psycho-social, cognitive, conative and affective development of child in a cogent and holistic manner. It also aims at school readiness and development of positive attitudes towards education. The preschool activities at the Anganwadi center, enables the elder siblings to attend school. The preschool education in Anganwadi center is provided through non-formal and play-way method.

Recognizing the two-fold significance of early childhood education, the Government has decided to improve the quality of preschool education in Anganwadi centers through a new initiative of regular provision of preschool kit in Anganwadi center. The items in the kit are multiple in terms of possible play activities and concepts, durable, safe for children (non-toxic and without sharp edges), manipulative, culturally and environmentally relevant, cost-effective, easy to maintain and store and conducive to creativity and problem-solving.

- *Adolescent Girls Scheme:* For the first time in India, a special intervention has been devised for adolescent girls using the ICDS infrastructure. The Adolescent Girls (AG) Scheme under ICDS primarily aims at breaking the inter-generational life cycle of nutritional and gender disadvantage and providing a supportive environment for self-development. The AG Scheme in its present form is being implemented through the Anganwadi Centers in both rural and urban settings in 507 ICDS blocks throughout the country.

Under the scheme, the adolescent girls who are unmarried and belong to families below the poverty line and school drop-outs are selected and attached to the local Anganwadi Center for six monthly stints of learning and training activities. The scheme includes two sub-schemes viz. Scheme - I - Girl to Girl Approach, designed for girls in the age group 11-15 years. Under the scheme supplementary nutrition is provided and in-service training on how to manage the Anganwadi center is imparted to the girls. The second scheme (Scheme-II) - Balika Mandal, intended to reach girls in the age group 15-18 years, aims at involving and motivating adolescent girls to participate in non-formal education, developing literacy skills and up-gradation of home-based skills in popular crafts of the area/region. Educational programme will stress personal hygiene, environmental sanitation, nutrition and child care.

The AG Scheme has been revised and renamed as Kishori Shakti Yojana (KSY) with a training component particularly on the vocational aspects aimed at empowerment and enhanced self-perception and convergence with other programmes of similar nature in the education, rural development, employment and health sectors. The objective of the Kishori Shakti Yojana are:

- to improve the nutritional and health status of girls in the age group of 11-18 years,
- to provide the required literacy and numeracy skills through the non-formal stream of education, to stimulate a desire for more social exposure and knowledge and to help them improve their decision making capabilities,
- to train and equip the adolescent girls to improve/upgrade home-based and vocational skills,
- to promote awareness of health, hygiene, nutrition and family welfare, home management and child care,
- to gain a better understanding of their environment related social issues and impact on their lives, and
- to encourage adolescent girls to initiate various activities to be productive and useful members of the society.



To achieve the objectives of the KSY, a basket of programme options are made available. Under one option, a concerted effort is to be made to provide nutrition and health education including sanitation and personal hygiene aspects. IFA supplementation along with de-worming interventions may be provided. Another option is to emphasize on education with particular attention on school dropouts and functional literacy among illiterate adolescent girls. Alternatively, vocational training activities may be undertaken for adolescent girls for their economic empowerment.

We will next study how the ICDS is implemented at central, state and grassroots levels.

**d) Programme implementation**

The ICDS programme is implemented, at the central level, by the Department of Women and Child Development, Ministry of Human Resource Development in coordination with the Ministry of Health. At the State level, implementation is the responsibility of either the Department of Social Welfare/Women and Child Development/Health or a separate Directorate of ICDS. The programme infrastructure along with the designation of the programme functionaries at the Block to Village/Community levels is presented in Figure 10.2. The Anganwadi center – a courtyard play center – is the symbol of Government systems and services, closest to disadvantaged communities, at village/hamlet level. It is the focal point for converging various government programmes for young children, girls and women from disadvantaged communities. The Anganwadi Worker assumes a pivotal role in the ICDS structure due to her close and continuous contact with the community. As the crucial link between the community and the government administration, she becomes a central figure in asserting and meeting the needs of the community she lives in.

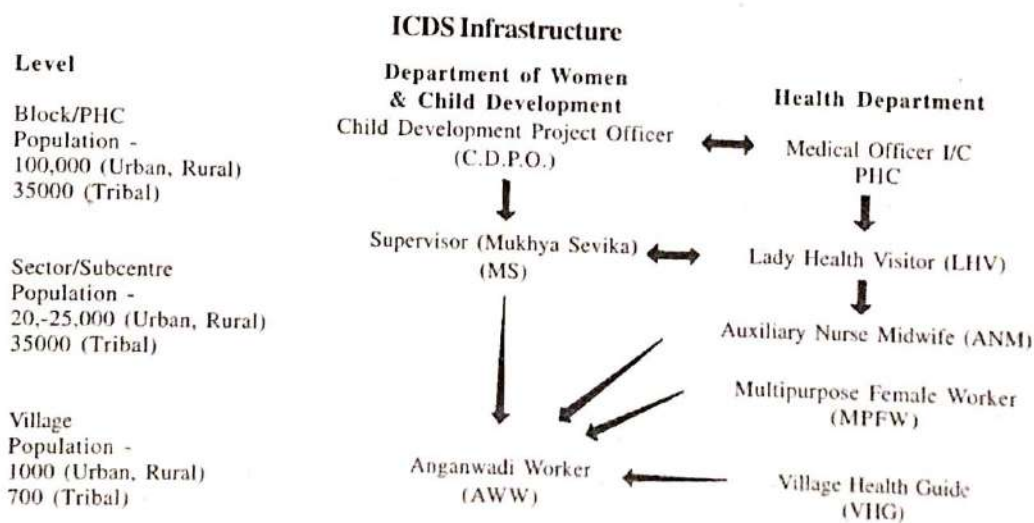


Figure 10.2: ICDS infrastructure

Thus, we saw that ICDS is a unique and largest programme in the world providing integrated services which holistically address the health, nutrition and development needs of young children, adolescent girls and pregnant/nursing mothers. In the next section, we would discuss the nutrient deficiency control programmes of the government of India. But first let us answer the questions given in check your progress exercise 2 to assess our learning of this section.

**Check Your Progress Exercise 2**

1. List the various nutrition programmes launched by our government to combat malnutrition.

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2. Enumerate the goals/objectives of ICDS .  
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3. Write the programme components of the ICDS.  
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### 10.5 NUTRIENT DEFICIENCY CONTROL PROGRAMMES

The Government of India has implemented various prophylaxis (preventive) programmes to combat malnutrition. Under these schemes, commercially prepared vitamins and minerals are supplied to vulnerable sections of the population through organized programmes. These programmes are known as Nutrient Deficiency Control Programmes.

The three important ongoing nutrient deficiency control programmes are:

- 1) National Prophylaxis Programme for Prevention of Blindness due to Vitamin A deficiency
- 2) National Anaemia Control Programme, and
- 3) National Iodine Deficiency Disorder Control Programme (NIDDCP).

We will now discuss the important aspects of these programmes such as objectives, target group, programme strategy and implementation. Let us begin with the National Prophylaxis Programme for Prevention of Blindness due to Vitamin A deficiency.

#### 10.5.1 National Prophylaxis Programme for Prevention of Blindness due to Vitamin A Deficiency

We have read in Unit 3 that Vitamin A deficiency has been recognized to be a major controllable public health nutritional problem. In India, milder forms of vitamin A deficiency affecting conjunctiva, like bitot spots are observed in about 1-5% preschool children. According to WHO, >0.5% prevalence of bitot spot in preschool children is indicative of public health significance. Longitudinal community studies reveal that in some parts of the country, the incidence of corneal xerophthalmia is about 0.5 to 1 per 1000 preschool children. It is estimated that about 30 - 40,000 children in the country are at risk of developing nutritional blindness every year. In recent years, however, there appears to be a significant change in the profile of vitamin A deficiency. The repeat survey of the National Nutrition Monitoring Bureau (NNMB) in 10 States in preschool children indicated a decline from about 2% in 1975-79 to about 0.7% in 1988-95. It is, however, important to understand that even mild vitamin A deficiency probably increases morbidity and mortality in children, emphasizing the public health importance of this disorder. Hence, the need for the National Prophylaxis Programme for the prevention of Nutritional Blindness due to vitamin A deficiency. Let us look at the objective of the programme.

**Objective**

The National Prophylaxis Programme for the Prevention of Nutritional Blindness due to vitamin A deficiency aims at protecting children 6 months to 5 years against vitamin A deficiency. Let us look at the target group of the programme.

**Target Group**

All children, of 6 months to 5 years, particularly those living in rural, tribal and slum areas, are beneficiaries of the programme. Next, let us review the strategy.





*Programme Strategy*

The programme focuses on two strategies a) prevention of Vitamin A deficiency, and b) treatment of Vitamin A deficiency. Let us study each strategy in detail.

a) *Prevention of Vitamin A Deficiency*

The prevention strategy within the programme comprises a long-term and a short-term intervention. While the short-term intervention focuses on administration of mega dose of vitamin A on periodic basis, dietary improvement is the long-term ultimate solution to the problem of vitamin A deficiency. We will study the long-term intervention first i.e. promotion of consumption of vitamin A rich foods.

i) *Long term intervention-Promoting consumption of vitamin A rich foods:*  
Action points under this intervention include that:

- Regular dietary intake of vitamin A rich foods by pregnant and lactating mothers and by children under 5 years of age must be promoted.
- The mothers attending antenatal clinics and immunization sessions, as well as, mothers and children enrolled in the ICDS Programme must be made aware of the importance of preventing vitamin A deficiency.
- Breastfeeding including feeding of colostrums must be encouraged.
- Feeding of locally available  $\beta$ -carotene (precursor of vitamin A) rich food such as green leafy vegetables and yellow and orange vegetables and fruits like pumpkin, carrots, papaya, mango, oranges etc. along with cereals and pulses to a weaning child must be promoted widely. In addition, whenever, economically feasible, consumption of milk, cheese, paneer, yoghurt, ghee, eggs, liver etc. must be promoted.

For increasing availability of vitamin A rich food, growing of vitamin A rich foods in home gardens and consumption of these must be promoted.

We will now study the short term intervention i.e. administration of massive dose of vitamin A.

ii) *Short term intervention-administering massive dose of vitamin A:* Administration of massive dose of vitamin A to preschool children at periodic intervals is a simple, effective and most direct intervention strategy. This is a short-term strategy. Unlike most other micronutrients, vitamin A is stored in the body for prolonged periods and hence periodic administration of massive dose ensures adequate vitamin A nutrition

- Under the massive dose programme, every infant 6-11 months and children 1-5 years is to be administered vitamin A every 6 months. Priority is to be given for coverage of children 6 months to 3 years since the highest prevalence of clinical signs of vitamin A deficiency is reported in this age group. The recommended schedule is as follows:

6 – 11 months — one dose of 100000 IU

1 – 5 years — 200 000 IU/6months

A child must receive a total of 9 oral doses of vitamin A by the fifth birthday. The contact with an infant during administration of measles vaccine between the age of 9-12 months is considered a practical time for administering the vitamin A supplement.

- A camp approach may be used for administering vitamin A to children 1-3 years and 3-5 years. However, the DPT/OPV booster in mid-second year to a child is a suitable time for the second dose of vitamin A (200000 IU). The 9th and 10th plan recommends the administration of vitamin A drops to children, 9 months-36 months of age, through RCH/ICDS system.



We will now study the second strategy i.e. ~~treatment of vitamin A deficiency~~

### b) *Treatment of Vitamin A deficiency*

All children with clinical signs of vitamin A deficiency must be treated as early as possible. Treatment schedule includes:

- Single oral dose of 200 000 IU of vitamin A immediately at diagnosis
- Follow up dose of 200 000 IU 1-4 weeks later.

Infants and young children suffering from diarrhoea, measles or acute respiratory infections must be monitored closely and encouraged to consume vitamin A rich food. In case, early signs of vitamin A deficiency are observed, the above treatment schedule must be followed. We will now study the implementation strategy of the vitamin A programme.

#### *Implementation Strategy*

The national prophylaxis programme for the prevention of nutritional blindness due to vitamin A deficiency is implemented through the Primary Health Centers and is sub-centers. The multi-purpose worker (F) and other paramedicals working in the Primary Health Centers are responsible for administering vitamin A concentrates to children under 5 years and for imparting nutrition education. The services of ICDS, under the Department of Women and Child Development, Ministry of Welfare, is utilized for the distribution of vitamin A to children in the ICDS Blocks and for the education of mothers on prevention of vitamin A deficiency.

The Mother-Infant Immunization Card is used to record and monitor the administration of vitamin A dose to children under two years. The Growth Monitoring Card/Register used for monitoring the growth of children under the ICDS programme, is used for recording and monitoring administration of vitamin A solution till the age of five years.

We will now study the second nutrient deficiency control programme, i.e National Nutritional Anaemia Control Programme.

### **10.5.2 National Nutritional Anaemia Control Programme**

We have read in Unit 3 in nutritional problems that nutritional anaemia is a serious public health problem. Although anaemia is widespread in the country, it especially affects women in the reproductive age group and young children. It is estimated that over 50 percent of pregnant women are anaemic. Nutritional anaemia, due to iron and folic acid deficiency, is directly or indirectly responsible for about 20 percent of maternal deaths. Recently the NFHS-2 (1998-99) data (NFHS 2000) reveal that 74% children, 6-35 months of age, are anaemic. Anaemia is a major contributory cause of high incidence of premature births, low birth weight and perinatal mortality. To reduce the prevalence of anaemia in pregnancy the national anaemia prophylaxis programme of iron and folic acid distribution to pregnant mothers was initiated by Government of India in 1972. Let us look at the objectives of the programme.

#### *Objectives*

The National Nutritional Anaemia Control Programme aims at significantly decreasing the prevalence and incidence of anaemia in women in reproductive age group, especially pregnant and lactating women, and preschool children. Let us look at the target group of the programme.

#### *Target Group*

The beneficiaries of the programme include:

- Women in the reproductive age group, particularly pregnant and lactating mothers.
- Children 1-5 years of age.



- Family planning acceptors (women who accept family planning measures like intrauterine devices (IUD) and tubectomy).

We will now look at the programme strategies.

### Programme Strategy

The programme focuses on primarily three strategies: a) Promotion of regular consumption of foods rich in iron b) Promotion of consumption of iron and folic acid supplements to the 'high risk' groups, and c) Identification and treatment of severely anaemic cases. We will study each strategy briefly now. Let us start with the first strategy i.e. promotion of regular consumption of foods rich in iron.

#### a) Promotion of regular consumption of foods rich in iron

Various action points under this strategy include:

- Regular dietary intake of iron and folic acid rich foods by pregnant and lactating women, adolescent girls and children under 5 years of age must be promoted.
- Regular consumption of iron rich foods such as green leafy vegetables (such as mustard leaves (sarso ka sag), amaranth (chaulai sag), colocasia (arbi) leaves, knoll khol greens (Ganth Gobi ka sag), bengal gram greens (chana sag), turnip greens (shalgam ka sag), cereals (such as wheat, ragi, jowar, bajra), pulses, especially sprouted pulses and jaggery (gur) must be promoted widely. In addition, wherever culturally and economically feasible, consumption of animal foods such as meat, liver, poultry etc. must be encouraged.
- Ensure incorporation of iron rich foods such as green leafy vegetables in the weaning foods of infants.
- Vitamin C (ascorbic acid) promotes absorption of iron. Regular consumption of vitamin C rich foods such as lemon, orange, guava, amla, green mango along with iron rich foods must be promoted.
- For increasing availability of iron rich foods, growing of iron rich foods in home gardens and consumption of these must be promoted.
- Tea inhibits absorption of iron. Advise a reduce consumption of tea, specially during pregnancy, for improving the absorption of iron and prevention of anaemia. Let us discuss the second strategy now.

#### b) Promoting consumption of iron and folic acid supplements to the 'high risk' groups

As a priority, all pregnant women, irrespective of haemoglobin levels, must be provided with the recommended dose of iron and folic acid (folifer) supplements. Preschool children, especially those in tribal areas and ICDS blocks, should be given on priority the recommended dosage of iron and folic acid supplements. The recommended doses of folic acid and iron supplements are:

- Pregnant women* : One big (adult) tablet per day for 100 days (each tablet containing 60 mg/100 mg of elemental iron and 500 µg folic acid). These tablets provided to women after the first trimester of pregnancy.
- Preschool Children (1-5 years)*: One paediatric (small) tablet containing 20 mg iron and 100 µg folic acid daily for 100 days every year.
- Lactating women and Intrauterine device (IUD) acceptors*: One big (adult) tablet (containing 60 mg/100 mg of elemental iron and 500 µg folic acid) per day for 100 days.



*c) Identification and treatment of severely anaemic cases*

Women with haemoglobin levels below 7 g/dl are considered to be severely anaemic. Testing of blood for haemoglobin concentration at field level is neither considered safe or practical. Therefore, as far as possible, severely anaemic cases should be identified on the basis of clinical signs. All health workers should be trained to identify such anaemic cases. Further, cases of severe anaemia should be referred to the PHC medical officer for diagnosis of the causative factors and treatment. Recommended therapeutic dose, for women in the reproductive age group is one big tablet of iron thrice daily for a minimum of 100 days. This will provide equivalent to 180 mg elemental iron and 1500 µg folic acid per day. In case of 100 mg elemental folifer tablet, recommended dose is two (big) tablet of iron daily for a minimum of 100 days. We will now study how the programme is implemented in the field.

**Programme Implementation**

The programme is implemented through the Primary Health Centres and its sub-centres under the RCH programme. The Multipurpose Worker (F) and other paramedicals working in the Primary Health Centres are responsible for the distribution of iron tablets (adult and paediatric doses) to the beneficiaries. The functionaries of ICDS programme assist in the distribution of iron tablets to children and mothers in the ICDS Blocks and for imparting education to mothers on prevention of nutritional anaemia. Department of Food (Ministry of Food and Civil Supplies) is responsible for promoting consumption of iron rich foods. In addition, services of other community level workers and involvement of formal and non-formal education, media, horticulture departments and voluntary organizations is utilized for the effective implementation of the programme. In addition, records of under fives and antenatal care maintained under the MCH services and ICDS programme, is used for identifying beneficiaries, as well as, for recording and monitoring the distribution of iron and folic acid supplements.

We will now study the third nutrient deficiency programme i.e. National Iodine Deficiency Disorders Control Programme (NIDDCP).

**10.5.3 National Iodine Deficiency Disorders Control Programme (NIDDCP)**

We have read in Unit 3 that Iodine Deficiency Disorders (IDD) form a spectrum of abnormalities which include goitre, mental retardation, deaf mutism, squint, difficulties in standing or walking normally and stunting of the limbs. Iodine deficient women frequently suffer abortions and still births. Their children may be born deformed, mentally deficient or even cretins. All these problems are caused by simple lack of iodine, and goitre is the least tragic of them. No State in India is free from IDD. In India, out of the 239 districts surveyed (in 29 states and union territories), 197 districts have goitre prevalence rates ranging from 10% to 65%. Women in child-bearing age and children under the age of 15 years are most susceptible to IDD. With every passing hour, 10 children are being born in India who will not attain their optimum physical and mental potential due to iodine deficiency. In 1962, the Government of India launched the National Goitre Control Programme (NGCP), which aimed at controlling goitre by supplying and ensuring consumption of iodized salt to the population living in the endemic region. The Government re-structured the NGCP in 1986, and aimed at achieving the goal for universal iodization of salt to control IDD in India by 1992. The National Goitre Control Programme, referred to as the National Iodine Deficiency Disorders Control Programme (NIDDCP) since April 1992, is being implemented by the Department of Health. The NIDDCP aims at universalizing iodization of all edible salt. Let us now look at the objectives of the NIDDCP.

**Objectives**

The objectives of the NIDDCP include:

- Supply of iodized salt in place of common salt to the entire country. The emphasis is on establishing iodized salt with active private sector participation.
- Re-survey to assess the impact of supply of iodized salt.



By September 1993, about 65 percent of the total population in the country had been covered in the Government of India's drive to universalize iodized salt. At the macro level, the salt producing areas of India are located in the States of Gujarat, Tamil Nadu, Rajasthan, Andhra Pradesh, Maharashtra, Orissa, Karnataka and West Bengal. Overall, the private sector handles 94% of salt iodization with the public sector handling a miniscule 6%. Under the Prevention of Food Adulteration Act (PFA Act), the level of iodization has been fixed at 30 ppm of iodine in salt at the manufacturing level and 15 ppm at the household level. To ensure exclusive use of iodized salt in endemic areas, the sale of non iodized salt is being discouraged nationally. Let us look at the target population for NIDDCP.

### **Target Group**

Entire population, particularly women in child bearing age and young children.  
Now let us look at the implementation strategy.

### **Implementation strategy**

The NIDDCP is executed by a multiplicity of agencies comprising the health, industry and railway ministries of the Central Government. The Ministry of Health and Family Welfare and Directorate General of Health Services (DGHS) is responsible for the national implementation of the programme. The Salt Department, under the Ministry of Industry, is the nodal agency for production, distribution, monitoring and quality control of iodized salt. The Salt Commissioner, in consultation with the Ministry of Railways, arranges for the movement of iodized salt from the production center to the States. The State Government is responsible for the distribution of the iodized salt within the state either through the Public Distribution System or through the open market. For effective implementation of the NIDDCP, a central IDD Cell is established at the DGHS level and is responsible for coordinating surveys, training, monitoring and management of the IDD programme. All the states/UTs have been advised to set up IDD Control Cell.

Thus you saw that government has very well conceptualized and formulated programmes to combat micronutrient deficiency in our country. We will now study about the supplementary feeding programmes of the government. But first, let us check our learning by answering the questions included in the check your progress exercise 3 given next.

### **Check Your Progress Exercise 3**

1. List the various nutrient deficiency control programmes? Enumerate the objectives of any one of the programmes.

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2. Explain the dietary actions you would take to promote foods rich in vitamin A.

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3. Mention the dosage of iron and folate for pregnant and preschool children and also the dose of vitamin A for infants and pre-schoolers.

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## 10.6 SUPPLEMENTARY FEEDING PROGRAMMES

Food supplementation programmes have a very important role to play to combat malnutrition. The aim of these supplementary feeding programmes is to improve the nutritional status of vulnerable groups through distribution of food supplements.

Different types of supplementary feeding programmes have evolved over the years as short-term measures to combat malnutrition. Some of these are on going and some are no longer in operation now. We will study about the following supplementary feeding programmes in this section:

1. National Programme of Nutritional Support to Primary Education (Mid Day Meal Programme)
2. Special Nutrition Programme
3. Pradhan Mantri's Gramodaya Yojana (PMGY)
4. Balwadi Feeding Programme
5. Composite Nutrition Programme, and
6. Applied nutrition programme

Let us get to know about these programmes then.

### 10.6.1 National Programme of Nutritional Support to Primary Education (Mid Day Meal Programme)

The National Programme of Nutritional Support to Primary Education commonly known as Mid Day Meals Scheme was launched in August, 1995 consequent to the favourable impact of the scheme on children in some States, as well as, the comfortable food stock position in the country, and to relate primary education with nutrition, health and ICDS.

The mid day meal programme is one of the most important ongoing feeding programmes organized by the Department of Education not only to improve nutritional status of school children but also to attract poor children to school. Further, school age children are in a phase of rapid growth and development. Their nutritional needs are considerable. However, children, particularly from poor families, do not get enough food to eat. Their home diets are often inadequate. Many, especially in rural areas, come to school partly hungry and some even on empty stomach, trekking long distances. Under such circumstances, they are unable to concentrate on the studies and benefit from the education. Hence, providing a supplement in school would complement the home diet and sustain the interest of children in learning so that drop out rates are lowered and school attendance improves. We would study about the objectives, target group, programme component and strategy of MDM programme. Let us look at the objectives first.

#### *Objectives*

The programme is intended to give a boost to universalization of primary education by increasing enrolment, retention and attendance and simultaneously impacting upon nutritional status of students in primary classes.

#### *Target Group*

All students of primary classes (I-V) in the Government, Local Body and Government aided schools in the country are covered in all States/UTs (except Lakshdweep). From October 2002, the programme has been extended to children studying in Education Guarantee Scheme and Alternative and Innovative Education (EGS & AIE) Centres. Private un-aided schools are not covered under the programme. The main beneficiaries



of the programme are therefore school children between 6-11 years of age attending elementary/primary schools.

Let us now review the programme component and strategy.

### *Programme Component*

The major component of the MDM programme is food supplementation. The central support consists of:

- 100 gram food-grains (wheat or rice) per child per school day where cooked meals are served; 3 kgs foodgrains per student per month where foodgrains are distributed.
- Transport subsidy upto a maximum Rs.50 per quintal for movement of foodgrains from the nearest FCI depot to schools.
- Food-grain (wheat or rice) is supplied through Food Corporation of India the cost of which is reimbursed at below poverty line (BPL) rate.

As per provision mentioned in the programme, the meal is to be provided for 200 working days in a year and the rate of mid day meal is Rs. 2 per child per day.

The meal/food supplement distributed as part of the programme provides roughly 350-450 Kcal and 20-30 g protein per child per day, which is expected to meet one-third of the energy and half of the protein recommended dietary intakes of the children.

The food supplements provided through the programme vary from ready-to-eat food like fruit bread etc. to cooked food like 'upma' or 'khichri' or others, which are convenient to eat. In Tamil Nadu, traditional 'rice-sambar' preparation is used in the programme. In Rajasthan *ghugri* (porridge) is being provided. Whereas, in the State of Delhi a six day cycle menu of cooked foods is being used for MDMP. The raw materials supplied by the international agencies include corn soya meal (CSM), wheat soya blend, soya fortified bulgar (SFB) and salad oil. The programme was conceived for inculcating the qualities of discipline, comradeship, good food and healthy habits and knowledge about nutrition through the provision of nutritious meal daily.

### *Programme Implementation*

The programme is operated by the Department of Education. The programme is being implemented through Panchayats and Nagarpalikas. The feeding is usually carried out within the school premises. The school teacher is responsible for the preparation and distribution of food and maintenance of records such as food stock register, health cards and attendance register relevant to the programme. A helper is appointed to assist the teacher in organizing the feeding. Special budgetary provisions are made to meet the cost of fuel, condiments and other incidentals. Salaries of cooks, helpers, etc., as well as, expenditure on construction of kitchen sheds needed under the programme are eligible for coverage under the poverty alleviation schemes. Other costs of conversion of foodgrains into cooked meal/processed food are to be met by implementing agencies/states. There is a wide variation in the implementation of the programme from State to State.

We will now go over to the next supplementary feeding programme, i.e Special Nutrition Programme.

### **10.6.2 Special Nutrition Programme (SNP)**

The Special Nutrition Programme was launched by the Central Social Welfare Board (CSWB) in 1970-71. The aim of the programme was to provide supplementary nutrition to children, pregnant women and nursing mothers belonging to the weaker sections of the society. In 1970-71, it was envisaged that nutritious food would be supplied to 6.8 lakh children in the age group 0-3 years. However, the benefits of the programme