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NUTRITION PROGRAMMES AND HEALTH

The development of national nutrition programmes with special reference to vulnerable sectors of the population

Paper for the Technical Discussions

CONTENTS

1. INTRODUCTION

(1) At the core of malnutrition lies the problem of poverty, in our Region especially, of rural poverty. The low productivity and/or poor purchasing power of the small landholder, subsistence farmer and landless labourer, are the principal cause of substandard food consumption. Problems of land tenure, irrigation, overpopulation, lack of incentives, inadequate technology, etc., some of them of formidable magnitude, tend to perpetuate, or even aggravate this precarious situation. National efforts should thus be oriented towards improving the lot of the rural masses through an effective rural development strategy, in the framing of which health and nutrition objectives must receive due consideration.

(2) The Regional Committee recognized this when, at its twenty-eighth session in 1975, it chose the subject of "Development of national nutrition programmes, with special reference to vulnerable groups of the population" (SEA/RC28/R8), for the Technical Discussions during its 1976 session. Nutrition had not been discussed since 1961 and this renewed interest echoes the resolutions of the 28th World Health Assembly which, in turn, relate to the World Food Conference held in Rome in 1974. This important conference recommended that countries strengthen programmes for the control of nutritional deficiencies and establish policies that recognize the provision of sufficient food and proper nutrition as important objectives in socio-economic development planning.

2. NUTRITION, PLANNING AND DEVELOPMENT

(3) Some countries are beginning to realize that food and nutrition are fundamental aspects of development planning and that policies in agriculture, rural development, employment, health, etc., need to be defined and harmonized to improve the availability of food and the nutritional state of the population. In fact, improving the nutritional condition of the people should be unmistakably recognized by planners and policy makers as an objective of socio-economic planning for national development in its own right. FAO has pioneered, with WHO's sustained interest and participation, this multi-sectoral approach through the promotion of national food and nutrition policies (NFNP), which jointly consider factors related to food supply, food demand and health. NFNP are aimed more at removing the deep-rooted causes of malnutrition and of inadequate food availability than at treating their consequences.

3. NUTRITION PROGRAMMES FOR THE VULNERABLE GROUPS: INTEREST AND RESPONSIBILITY OF HEALTH

(4) Why should the health sector be interested in nutrition? It is easy to show that nutritional factors underlie many diseases and that a poor nutritional state is directly or indirectly responsible for the high indices of infant and pre-school morbidity and mortality observed in the developing countries. Furthermore, the lethality of diseases that are inconsequential in well-nourished children, such as respiratory

infections, whooping cough, measles, diarrhoea, etc., is very high in those that suffer from concomitant malnutrition. All this means that the worse the nutritional state of the population, the higher the need for health inputs and the lower the returns for the investments in health.

(5) Health services, particularly for the mother and child are thought of today as a "package of services", the idea being that the total health effects to be accrued from such a package will be more than the sum total of its individual components, and also their cost will be less through the use of common infrastructure, resources and manpower. The health sector should plan for the inclusion of various nutritionally-oriented, protective, preventive, curative and rehabilitative services to be provided, in the package of health services, aimed at children and mothers, who are the nutritionally more vulnerable groups.

(6) Infants are specially vulnerable to nutritional disease because the rapid rate of growth makes strict demands on both the amount and quality of the food intake, and because they are dependent on others for any food they get. Breast milk plays a key role in the successful nutrition of the infant, but becomes progressively insufficient for body maintenance and growth beyond six months. An insufficient food intake and a high susceptibility to infections account for the fact that the highest number of deaths in which the nutritional state is a direct or associated cause occurs in children in their first two years of life.

(7) The older pre-school child is still very vulnerable, mainly because the amount of food he needs represents an increasing proportion of the food available to the family. This vulnerability, mainly manifested by a decreased rate of growth, is not translated into such high morbidity and mortality as in the younger child.

(8) The nutritional demands of pregnancy and nursing make women in these conditions also highly vulnerable. The effects of nutritional disease do not, however, have a clear impact on indicators related to their own health, but rather on those of their offspring.

4. ORGANIZATION OF NUTRITION PROGRAMMES IN HEALTH

(9) In the health services, nutrition is viewed today as a component of programmes, the predominant strategy of which is directed at strengthening and expanding the nutritional activities in the primary health services, as an integral part of family health programmes. For this purpose, there is an obvious need for a body or Nutrition Unit at the central level of the health structure which can supply the necessary technical inputs for health project management and for the ongoing health programmes.

(10) The central level should exercise responsibilities in: the supply of data on the nutritional state of the population; the various steps of project formulation that contain nutritional components; channelling international aid for food and nutrition; the nutritional surveillance of the population; the design and implementation of programmes to combat

specific nutritional deficiencies, and representing the health sector in inter-sectoral planning related to food and nutrition.

(11) The organization of nutritional activities at the intermediate or state level, should be a reproduction, on a smaller scale, of that at the central level. Its principal responsibility should be to adapt the centrally designed standards, methods, norms, etc., to the existing local conditions.

(12) At the local level, the main outlet for nutritional activities will be the health centre, where nutrition should be a part of a "package of services" aimed principally at the mother and her child. The main constraint at the local level is manpower, that is, adequately trained personnel capable of performing the relatively simple tasks required in nutrition. Some countries still insist on using professional staff, but is becoming increasingly evident that health services cannot offer anything like a suitable coverage if much more use is not made of auxiliary and voluntary personnel from the communities themselves.

5. THE NUTRITIONAL PROBLEMS: ROLE OF THE HEALTH SECTOR IN THEIR CONTROL

(13) The more generally recognized nutritional problems of public health significance in this Region are xerophthalmia, nutritional anaemias, endemic goitre and protein-energy malnutrition (see Table on p.8). The term "specific nutritional diseases" is used to cover xerophthalmia, nutritional anaemias, and goitre, implying that they are due to the lack of one specific, mineral or vitamin nutrient, a fact that is generally, but not necessarily always, true. On the other hand there is protein-calorie-malnutrition (PCM) or protein-energy-malnutrition (PEM) as it is now called. This is not due only to a lack of specific nutrient or nutrients, but results from different combinations of inadequate calorie and protein intakes associated with repeated acute or chronic infections and infestations.

5.1 Nutritional Anaemias

(14) From a public health point of view, the important nutritional anaemias are those due to iron and/or folic acid deficiencies. Iron-deficiency anaemia is extremely common in many countries of the Region and affects not only the so-called vulnerable groups but also the adult men. The combined effects of poor availability of dietary iron (chiefly from vegetable sources) and parasitism of the intestinal tract (especially ancylostoma and trichuria infestations) explain the high prevalence of nutritional anaemia in the pregnant and nursing mother, as well as in the child during his period of rapid growth. Megaloblastic anaemias are sometimes associated with the more common microcytic/hypochromic/ferropenic type, and a lack of dietary folate, due to an inadequate intake of vegetables and/or their excessive cooking, is at the source of this problem. Two approaches have been tried in dealing with the problem of nutritional anaemias: iron supplementation in the form of tablets, and the iron fortification of foods.

5.2 Xerophthalmia

(15) Xerophthalmia is rarely a "pure" deficiency, but is usually associated with PEM, and often in its advanced form (keratomalacia) is precipitated by an infectious episode. Signs of the advanced form, which leads to blindness, are found only rarely in school-children and adults. It is after the first and before the fifth year of life that keratomalacia occurs and therefore control measures should be concentrated on this group. Children acquire the deficiency at this age because they are being weaned,from mother's milk that has a protective effect, to little else than the family staple food. When this is rice, which is totally devoid of carotene, the chances that the weaning child will suffer from vitamin A deficiency are considerable.

(16) Measures to control xerophthalmia include: education of the mothers, preventive massive oral doses (200 000 units twice a year), fortification of foods and the early institution of curative measures. All local health workers should know how to recognize and treat vitamin A deficiency, especially in its advanced forms because waste of time can lead to permanent loss of vision.

5.3 Endemic Goitre

(17) This specific deficiency results from a low intake of iodine, and is an important problem in certain countries of the Region. The disease has not only cosmetic significance, but also is associated, where it is highly prevalent, with endemic cretinism and deaf-mutism. Effective control of endemic goitre can be achieved through the iodization of salt, a procedure that does not change its taste and colour. The small increase in price, estimated at less than 0.1 cent (U.S.) per kg of salt, can be easily absorbed by manufacturers or subsidized by the Government. When iodization of all the salt consumed is not feasible, or when goitre is prevalent only in isolated groups, the intramuscular injection of iodized oil is a successful alternative that can provide protection for one to three years.

5.4 Protein Energy Malnutrition

(18) The concept of PEM as a deficiency disease, with a specific nutritional label, has misled governments and international organizations, including WHO, into trying to use measures to control it similar to those used for controlling specific nutritional deficiencies. These measures have not been successful because PEM, unlike other specific deficiencies, is a multi-dimensional problem. PEM must be viewed today in its wide ecological context and plans for its control should be part of national socio-economic development planning.

(19) The principal strategy in the control of PEM through health lies in strengthening and expanding the nutritional activities in the primary health services, especially those concerned with family health. The effectiveness of these activities depends on the strength of the services and on the coverage offered.

(20) The objectives of health in relation to the control of PEM are necessarily limited to:

- protecting the nutritional state of children of 0-5 years, and especially of 0-2 years;
- protecting the nutritional state of pregnant and nursing mothers;
- reducing the number of moderate cases that progress to severe malnutrition, and
- providing preferential treatment to those children that suffer from the more advanced forms of malnutrition, especially when combined with diseases known to cause high mortality when associated with malnutrition, such as diarrhoea/dehydration, measles, respiratory infections, tuberculosis, malaria, etc.

6. PROPOSALS

Some programmes and activities that can be launched to achieve the above objectives are set out below.

6.1 Education and Promotion

(21) Nutrition education should be part and parcel of health education. The "messages" should be meaningful and relevant to the context and in the environment in which they are to be delivered. That is, they should aim not at improving knowledge but at changing an attitude which has been identified as important in the genesis of malnutrition.

6.2 Surveillance of the Nutritional State by Weighing

(22) Mothers do not commonly realize how little their children progress during the very critical period that extends from the six month to the second year. By recording weight gains in a chart (that can be kept by the mother), in which the milestones of development are also noted, the health workers and the mothers are well informed of the nutritional condition of the child. WHO and UNICEF have developed such a growth chart, which has been satisfactorily tested in various countries,including some in this Region.

6.3 Programmes Directed to Mothers

(23) Three other programmes can be instrumental in protecting the viability and nutritional state of the infant and pre-school child: (i) nutrition education for mothers on their needs during pregnancy and lactation, (ii) supplementary feeding progr mmes, and (iii) family planning that will be effective in reducing he depletion produced by closely repeated periods of pregnancy and lactation.

6.4 Promotion and Protection of Breast-Feeding

(24) Breast-feeding is the rule in the traditional pattern of rural life, but urbanization has been universally associated with a decline in the

breast-feeding performance of the rural immigrants to the cities. Early introduction of bottle-feeding can be singled out as the most important cause of malnutrition during infancy in developing countries. It seems essential therefore to promote and protect breast-feeding, especially where its practice is being eroded, that is, in the slums of the big cities.

6.5 Curative and Rehabilitation Activities

(25) Preferential treatment should be given to the child suffering from the more advanced forms of PEM, in an attempt to reduce the number of severe cases which cause so much infant and pre-school mortality. Curative and rehabilitative services should be provided at the local health units and MCH centres and through special nutrition rehabilitation centres and hospitals.

6.6 Supplementary Feeding Programmes

(26) Feeding programmes are politically attractive and appear to provide answers to nutritional problems that cannot be expected to be resolved on a short-term basis. Supplementary feeding programmes are aimed at providing a significant contribution to the energy and protein intake of the beneficiaries and are important tools in protecting the nutritional state of infants and pre-school children, and in the rehabilitation of the more advanced forms of PEM. They should be conceived as an integral part of health services directed to the mother and child.

7 HEALTH IN INTER-SECTORAL FOOD AND NUTRITION PLANNING

(27) The health services should take part in inter-sectoral planning related to food and nutrition, particularly in the diagnosis and surveillance of the nutritional state of the population, and in sectoral programmes that need inter-sectoral co-ordination because of their repercussions on food and nutrition. Such programmes include demographic control and family planning, food control and legislation, and the provision of nutritional expertise. Health should be represented in any administrative body responsible for a national food and nutrition policy and food and nutrition planning.

8 THE NEEDS FOR RESEARCH AND TRAINING

(28) In the past, much of the effort in training and research was confined to areas of mostly academic interest and was in no way relevant to the realities of delivering nutrition through the health services. It is evident today that resources should be focussed on the constraints on training and knowledge that limit the implementation of nutrition activities, in other words to link training and research to the needs of the programme to be provided by the health services.

9 THE ROLE OF INTERNATIONAL AGENCIES

(29) Assistance in food and nutrition is provided by the United Nations Agencies, especially WHO, FAO/WFP, UNICEF, UNDP and more recently by the IBRD. Several countries in the Region also receive aid through bilateral agencies such as DANIDA, NORAD, SIDA, and US AID, or organizations, such as Catholic Relief Services, CARE, CARITAS, OXFAM, etc.

(30) The World Bank has considered nutrition to be one of its five priority areas. In this region there is, however, yet to emerge a collaborative nutrition programme between WHO and the World Bank. The confessed interest of the World Bank in nutrition might prompt the countries of the Region and our Organization to make use of its potential in establishing collaborative programmes in nutrition through the health services.

(31) The World Food Programme supplies aid in the form of food commodities and is principally interested in labour-intensive development projects, but is giving increased consideration to projects directed at the educational and health components of development. Health authorities from the countries of this Region and our Organization, could give increased attention to the possibility of tapping WFP resources to formulate health and nutrition-oriented programmes.

(32) FAO's activities in the fields of the promotion of national food and nutrition policies, nutrition education through agricultural extension services, home economics, food control, food legislation and the protection of the consumer, have a direct effect on nutrition. Indirectly, of course, all FAO's activities, are related to food supply and demand and so will have an effect on the nutritional state of populations. UNICEF is basically interested in nutrition as an inseparable component from children's health and well-being. It gives assistance in the form of supplies, equipment and finance to programmes that range from direct nutritional intervention (such as feeding programmes) to activities that will have an indirect impact on the nutritional condition of children (such as provision of safe water). WHO's main sphere of action has been to give technical assistance in the field of nutrition as related to public health. There is much need for co-ordination amongst the United Nations Agencies that provide assistance in nutrition. WHO should respond to its constitutional obligations and play a leading role in this decisive co-ordination.

SPECIFIC NUTRITIONAL DEFICIENCIES IN COUNTRIES OF SOUTH-EAST ASIA REGION

Country	Reference	Xerophthalmia			Nutritional Anaemia			Goitre		
		Prevalence	Programmes		Prevalence	Programmes		Prevalence	Programmes	
			Actual	Planned		Actual	Planned		Actual	Planned
Bangladesh	32,33	H N	VW N	VW L	H N	S N	*dna*	H L	none	dna
Burma	34,35	M L	S L	dna	H N	S N	dna	H L	W L	VW L
DPRK	-	dna	dna	dna	dna	dna	dna	dna	dna	dna
India	11	H L	W L	VW L	H N	W N	VW N	H L	W L	VW L
Indonesia	36,37	H N	W L	VW L	H N	none	W N	H L	W L	VW L
Maldives	-	dna	none	none	dna	none	none	dna	none	none
Mongolia	-	dna	none	none	I N	none	none	M L	none	VW L
Nepal	38,41	dna	none	none	dna	none	none	H N	S L	VW N
Sri Lanka	42-45	I L	W N	W N	H N	W N	VW N	M L	none	none
Thailand	46-48	H L	S L	dna	H N	S L	dna	I L	VW L	VW L

Prevalence: H = High
M = Moderate
I = Insignificant

Programmes: S = Small coverage
W = Wide coverage
VW = Very wide coverage
N = National
L = Local

dna = data not available