CF/RAD/USAA/DB01/2003-01923

Document Register Number [auto] **CF/RAD/USAA/DB01/2003-01923**

ExRef: Document Series / Year / Number **E/ICEF/1974/L.1303(PDF) Part 2**

Doc Item Record Title

The Young Child: Approaches to Action in Developing Countries - A Draft Report and Recommendations by the Executive Director. 158 pp.

Date Created / On Doc	Date Registered	Date Closed / Superseeded
1974-Mar-27	2003-Oct-30	

Primary Contact
Owner Location: Office of the Secretary, Executive Bo = 3024
Home Location: Office of the Secretary, Executive Bo = 3024
Current Location: Office of the Secretary, Executive Bo = 3024

1: In Out Internal, Rec or Conv Copy?
Fd2: Language, Orig Pub Dist: English , L.Avail: E,F,S,R.. ; L.Orig: E-?
Fd3: Doc Type or Format: pp = 158 p + ? b

Container File Folder Record
Container Record (Title)

Nu1: Number of pages	Nu2: Doc Year	Nu3: Doc Number
158	1974	1303

Full GCG File Plan Code
Record GCG File Plan

Da1: Date Published	Da2: Date Received	Da3: Date Distributed	Priority

Record Type: A04 Doc Item: E/ICEF 1946 to 1997 Ex Bd

DOS File Name

Electronic Details: No Document

Alt Bar code = RAMP-TRIM Record Numb : **CF/RAD/USAA/DB01/2003-01923**

Notes
CF/RAD/USAA/DB01/1997-01037

Print Name of Person Submit Images	Signature of Person Submit	Number of images without cover
R. Tooker	R. Tooker	55

2 sided

Cover Sheet Back

Blank

106. In the planning organization, taking account of the young child is usually handled by the social division. A number of ministries - health, education, agriculture, interior - also handle different aspects of the plan, in relation with the Planning Commission. Where these ministries have a planning unit, the work is facilitated.

107. An important step is to equip the country's planning organization so that it is in a position to guide planning for the young child. As a rule, national planning organizations are much less equipped in the area of human resources and social development than they are for economic planning. The data available are far more scanty, and it is necessary to draw directly on the knowledge, experience and wisdom of different groups of people. On the one hand, regional and local views are particularly important in matters so important in family life. On the other, a wide range of professional views are needed from administration, public health, agriculture and nutrition, education, social work, psychology and mental health, and sociology.

108. How to bring experience and knowledge from these different sources to bear on the processes of decision-making, resource allocation, and implementation with which responsbile government agencies are concerned, is substantially an unsolved problem. The necessary people are found in ministries and district offices, national and regional research and training institutions and political, co-operative and other non-governmental organizations. Their advice may be channelled through committees attached to the planning commission or to ministries or to a children's bureau or foundation. Sometimes they form part of a larger system of consultation on social services. Consultation may be supplemented by contracts given to institutions for preparing reports and recommendations.

/...

Experimentation is required to find satisfactory ways of co-opting the knowledge and advice that may be available, or can be developed, within the country.

Geographical distribution of services

109. It would be a reasonable policy for the Government to be ready to support the improvement of services in any part of the country where this is possible, through the provision of general directions, technical services and the training of personnel. To reduce the gap between richer and poorer areas of the country, the Government would give additional help in the poor areas. This would take the form of subsidies, more generous supply of materials, additional technical support, and building up the necessary infrastructure, on a larger scale than for the better off areas. Analyses of the governmental and semi-governmental resources going into different areas of the country will often show that the areas already better off are getting more, even though this is not a governmental policy.

110. It is usually difficult to improve social services in an area unless there is also economic improvement. Often, however, economic improvement does not carry with it any improvement in social services, and the assumption that it does is a mistake to be avoided. Therefore, wherever there are zonal development plans, it is logical and necessary to make provision for better social services. The growth of income in these areas offers a unique opportunity for improvement of the situation of mothers and children.

111. A very poor country may be unable to do more than start improvement in a particular zone that offers the best prospects of a good response, though this means leaving other parts of the

country behind until it is their turn to have a zonal development plan. The commitment to cover the whole country is important; it may be given on a phased basis extending through a number of development plan periods.

112. A better-off developing country can accelerate such a process. It has more resources of finance and personnel that it can channel into the economic and social development of disadvantaged areas. At an appropriate stage it can commit itself to helping all its population to meet their minimum needs.

113. Evidence of trends in the latter direction from country studies and programme examples investigated for the present study has been encouraging to a limited degree. Generally, the more backward regions are beginning to draw greater attention in schemes of national development, especially in the better-off of the developing countries. As examples of this trend, we may refer to the northeast region of Thailand, the Mindanao region in the Philippines, and policies for the development of higher plateau regions in Peru. The beginnings of integrated development, combining systematically a variety of social services and economic measures, can be discerned but these are yet only the beginnings. On the identification not of geographical areas, but of groups whose children are brought up, mainly for reasons of poverty, under conditions of deprivation, there is yet too little to report. In a few countries, as in the Philippines, welfare agencies identify "needy groups" and seek to supplement services available to them, but a broader developmental approach to disadvantaged groups is harder to find.

Appraisal, evaluation, and data gathering

114. Several activities that go under the broad name of "evaluation" can contribute to the improvement of a plan and programmes for the young child. Firstly, a prospective appraisal can be made of the situation, and of possibilities for effective programme action.

115. Secondly, the objectives of the programme should be stated wherever possible in operational or measurable terms. The plan of operations for the programme should show its logical framework - what inputs are expected to lead to certain outputs that, in turn, are expected to serve the objectives of the programme.

116. Thirdly, it is most useful to provide for feedback and monitoring of the programme. The object is to avoid a too common occurence, namely, a new programme launched with enthusiasm; after some time discovered to be a disappointment and neglected or abandoned; and another new programme launched in its stead. In the simplest terms, monitoring would mean a yearly or quarterly report - operational rather than financial or administrative - rendered promptly to the next supervisory level. Monitoring provides each operating level with information to improve the programme. It requires a delegation of authority to each level - state, district, municipality - to deal with a substantial proportion of the problems raised. A reporting system of this type can contribute to correcting programme activities and removing obstacles.

117. Finally, every few years a retrospective evaluation report may be made within the ministry. There is also need for less frequent evaluations that are external and independent of the system of implementaion. They may be undertaken, for instance, through competent but autonomous evaluation units within the administration, or through universities and research institutions.

118. Statistics. The lack of statistical data for taking account of the young child in planning is widely felt. As in the programme fields, step-by-step improvements are possible, especially when related to programme needs. It is important to make specific financial provision for this process. Amongst the most useful possibilities to exploit are:

(a) Where the statistical office is making household surveys the insertion of a few questions relating to the situation and needs of the young child;

(b) Administrative data in the ministries that are usually not being exploited - number of points of service, training of personnel, etc.;

(c) Unanalysed census data. It is particularly important to break down national totals or averages into operational areas, e.g. urban modern sector, slums and shanty towns, rural cash crop areas, rural subsistence areas, development zones;

(d) Special studies may be commissioned for one or more representative areas. Training institutions may be able to undertake such studies while giving field practice to their students;

(e) Improvement of vital statistics is a priority for many countries. This should include the extension of the area in which births and deaths are registered, and improvement of the quality of the statistics;

(f) Inclusion of indicators of change in the system of statistics, in order to help monitor the effectiveness of a young child policy and its components. Most of the items mentioned above can contribute to this if arranged to include comparable data for successive periods. The programme discussed in chapter III can also contribute, e.g. in nutrition surveillance.

III. POTENTIALS FOR DEVELOPMENT OF SERVICES OR PROGRAMMES

Contents

/...

Summary

119. This chapter discusses various measures that can be taken in developing countries to improve the situation of the young child. They are considered from the point of view of policy, with indications for and against particular steps at different stages of a country's development. Technical information is generally omitted because it is available from other sources, some of which are indicated in footnotes.44/

120. Services are considered in a development sequence, ranging from the simplest to the more elaborate. The distinction is made between services most communities already know about and will participate in, and those for which the government has to take the predominant responsibility, at any rate, until the community comes to realize their value. This distinction affects the method of approach and order of development of services relating to water and sanitation, food and nutrition, and maternal and child health.

121. Particular attention is given to services supporting the mother because they tend to be neglected. Literacy training appears to be one of the best means to raise her status, to strengthen responsible parenthood and to improve the quality of care given to children. At the same time, it is necessary to reduce the excessive and time-absorbing workload the mother carries, and various possibilities for doing so are discussed.

44/ Naturally it is not UNICEF's role to endorse all the information and recommendations given in the works referred to; sometimes the references present differing points of view.

122. At the end, the chapter lists a number of subjects that have not been treated in the study and also priority areas for field research.

A basic approach

123. Some fundamental weaknesses have marked efforts to improve the situation of the young child in both industrialized and developing countries. Basic needs that are inseparable in real life are often met in ways that are fragmented, sectoral, and removed from the family and the community. Moreover, the physical and social context has not been sufficiently taken into account in the organization of social services. These difficulties are more serious for developing countries because of their shortage of resources, but industrialized countries are also trying to overcome them.

124. Viewed as a whole, the basic developmental needs of early childhood require three action components: education, prevention, and remedial or curative services. Only as these three components come together at a point of delivery and clearly within the reach of the concerned family, will the well-being of the young child be improved.

125. Programme development is part of a process of social change that affects the community institutions as well as the people who use their services. In considering various potentials for programme development, it would be of considerable advantage to view them as dynamic elements in the context of the local situation, rather than mechanically or administratively as technical issues. Each country will, through the planning process, determine the direction and content of its programme development, within the limits of available resources. A concern for the young child does not imply reliance

solely on direct services, as these are limited with the present state of resources, knowledge and technology.

126. Similarly, a great deal can be done by the local community using its manpower and limited cash resources both indirectly and directly to improve the well-being of the family. Programmes that affect the family, particularly the mother and the children, need local acceptance if they are to be used well.

127. Chapter I referred to the importance of securing the collaboration of community leaders. They may be the traditional leaders, political leaders, or leaders selected for dealing with family and social services. For example the Brazilian Association of Credit and Rural Assistance (ABCAR) works through municipal boards and community councils. It asks villagers to select leaders (men and women) to whom it gives a brief orientation and then supports them through regular contacts by its field staff.[45/] In Guatemala the health "promoter" is selected for training in consultation with community leaders.[46/] In the United Republic of Tanzania the block and unit leaders of the political party help with social education and services, and in a pilot project in Cebu, Philippines, a unit leader system that was useful for village security is being revived to provide health and nutrition education and services.[47/]

45/ H.C. Hannann, Importance of Health Council Members' Roles as Perceived by Extension Agents and Council Members in Santa Catarina, Brazil. Madison, Wisc., University of Wisconsin, 1971. Master of Science thesis.

46/ E.C. Long, and D.A. Viare, "Health Care Extension using Medical Auxiliaries in Guatemala". The Lancet, Jan. 26, 1974.

47/ F.S. Solon, "An approach to reaching the pre-school child in a village level situation", unpublished manuscript.

128. In the following sections, we do not seek to give technical recommendations concerning services and programmes, but only to indicate approximately what they can do, and, where information is available, the range of costs in 1973. We have tried to start with the simplest services and move on to the more complex. This may suggest the steps of a process of growth or development of services, but we believe that each country should choose the order it wishes to follow, allowing flexibility and giving considerable weight to the views of the populations to be served and the contributions they are willing to make. We have tried to indicate which services are likely to be wanted by people in advance of their being available to them, and which would have to be mainly financed by Government because their benefits, though great, are less recognized or because their cost or management are beyond the capacity of the community to participate in.

129. This approach results in an order of presentation that sometimes differs from one based on the impact and benefit of each service (e.g. for the different components of child health services). In a country with services in the capital and an infrastructure extending down to district offices, the problem of areas where there are few or virtually no services offers a logical starting point. Further, this is the situation of vast areas of the world. How to proceed in such areas is becoming of more interest to countries with policies of meeting minimum needs, fighting poverty, helping disadvantaged groups, or bringing the more remote rural population into the stream of national development.

130. In UNICEF, the Board has asked for priority to be given to projects assisting children in disadvantaged areas, and the World Bank has often drawn attention to the needs of the 40 per cent of the

population in the lowest socio-economic classes. A United Nations leadership may think of this discussion as applying to the "least developed" countries. It also applies generally to the disadvantaged areas of all developing countries, which are inhabited by a large population.

131. While the discussion of organization of services applies to disadvantaged areas generally, the countries better off than the least developed have more resources of finance and personnel to put into their disadvantaged areas. They can deal with more of them at once, and help them to advance more rapidly. Countries with more resources may decide to install more elaborate services from the start. Each country chooses the degree of elaboration of services it wishes to install. However, this report suggests as a criterion that the level chosen should be capable of wide extension, in some cases through interlocking with existing services.

132. In general, in this report the higher levels of services are treated more briefly than the starting levels. This reflects no point of view that they are less important - on the contrary. However, more information about them is available elsewhere.

Safe and sufficient water

133. Water is listed first because of its importance for child health, and for the mother, and because its convenience is appreciated by villagers even if lack of safe water is not recognized as being responsible for poor hygiene and disease. For the family, particularly the mother, nearby safe water in adequate quantity is one of the primary labour-saving devices that she needs.[48/] In some countries,

---

48/ See chapter I, paras. 26 and 27.

water haulage by hand carts or animals is used, but cost of water delivered by vendors is usually high for small quantities of water, and an increase in the quantity of water used is an important factor in improving health.

134. In many rural water supply development schemes, villagers are invited to contribute labour and sometimes materials to the digging of wells or the laying of pipes. The Government supplies technical direction, elaborate equipment if required, and sometimes scarce materials (cement, iron reinforcing rods). The Government should also provide health education. When water supply is left solely to the Government, the local community may assume no responsibility, which leads to frequent breakdown of equipment, lack of adequate maintenance, and contamination.49/

135. Household water is also first in another sense. Villagers who have co-operated successfully in installing a water system may be ready to go on to a widening circle of health-oriented and other co-operative self-help community efforts, such as family food production, reforestration for domestic fuel supply, local support of health and education services, home improvements, sanitation, etc.

49/ The Yemen case study points out, for example that a 1972 survey in Sana'a found that as many as 80 per cent of the water sources used for domestic purposes were contaminated owing to lack of well covers and unwashed water buckets. At the Lomé conference it was reported that in dry areas many new wells become contaminated within about nine months because of lack of cover, concrete platforms, and sanitary measures. In many Asian countries, this is avoided by closing the well and supplying a hand pump, but owing to the same absence of popular understanding and participation, it is allowed to stay out of repair and people have to go back to polluted surface water.

136. In the last ten years, technological progress has lowered the cost of safe water. The number of dry wells can be reduced by new hydrogeological techniques, including remote sensing by satellite, which is being explored in India. High-speed drilling rigs can bore through rock in a few days (e.g. 150 ft. of hard rock in two days) where artisan methods would need as many months. Plastic pipe is coming into use in Bangladesh and elsewhere, for lining tube wells, and it is used in other countries for reticulation systems. It is cheaper, easier to join, and much lighter to transport than iron pipes.

137. Where high-speed drilling is used in rock country, the capital cost of drilling and casing a well serving 200 people is of the order of $10 per foot,[50/] for example, $1,500 for a 150 ft. well. To this it is necessary to add about $200 for a deep-well hand pump, or some $300 for an electric pump. In easier conditions, a well in the soft earth of delta country can be put down by artisans. In Bangladesh it costs about $50 for sinking and casing, and the shallow hand pump costs about $15. External aid is often available for capital costs. Recurring costs would be some $2 to $3 per year for repairing plastic plunger-washers for hand pumps, some $200 per year if a motor pump is used for deep wells. This latter sum would

---

50/ Prices quoted throughout the report are based on 1973 conditions.

represent $5 per year for each family using the well.[51] A hand pump is sufficient for a shallow well.[52]

51/ An example of the effect of a simple labour-saving device provided by UNICEF, coupled with a community effort and local financial support to reduce women's work in the village, is given below:

A typical village in eastern Africa with 70 families totalling 450 people depended on water from a stream about a mile distant and 350 feet below the village, but inaccessible to the animals. Each family had one or two cows needing at least 15 gallons of water each day. The women carried water in four-gallon kegs or cans, walking down to the river and trudging back, three to five times each day, each round trip requiring about one hour. The villagers agreed to pool efforts and resources to establish a simple water supply storage distribution system for the village, school and market, based on a UNICEF-supplied hydraulic ram and pipe. A water ram, with capacity to lift 750 gallons per hour, 320 feet, was provided at a cost of $300, together with 3,000 feet of pipe to feed a 10,000 gallon reservoir, and 4,000 feet of pipe with fitting and spring-loaded taps for 20 standpipes and four watering troughs. The total cost: about $2,500. Locally procured materials for the headworks and installation of the ram and piping added $600 provided from local Government development funds. The villagers arranged for a loan of about $400 to cover the costs of materials for construction of the sand-filter and reservoir, which was built by the villagers. Their donated labour input was valued at $700. The total cash investment of about $4,500 is equivalent to less than $9 per person in the village, for a system expected to last for 30 years, which could be amortised for 30 cents per person per year. The repayment of the loan taken out by the villagers collectively involved a charge of less than half a shilling ($US.075) per month per family. Since the system requires very limited maintenance, the annual cost per family has been less than 10 shillings ($US 1.50) - a small charge for relief of the women from 1,500 hours of hard work each year.

52/ For further information see E.G. Wagner and J.N. Lanoix, Water Supply for Rural Areas and Small Communities, WHO Monograph Series, No. 42 (Geneva, 1959).

Food and nutrition[53/]

138. After a community has got itself a safe water supply, there is an opportunity for continuing the process of community improvement by going on to deal with more complex subjects such as shortages of food, or the provision of health and educational facilities. This section deals with food and nutrition; supplementary feeding and the treatment of malnutrition and taken up under "health". In accordance with the general plan of this chapter, the section begins with actions in which the community might be ready to participate, and then goes on to what are called "primarily government responsibilities" because community participation cannot be expected. Some of the latter are of the greatest importance, and would have been listed first if another approach had been used.

139. The higher prices of staple foods, which rose rapidly in 1973, will probably continue for a number of years. While this will bring a welcome increase in income of some cultivators, landless labourers and low-income urban and peri-urban dwellers will be under greater pressure to get enough food. It was already the case in India that among the poorest,30 per cent of the population, 80 per cent of their income is spent on food, and similar conditions are found in many other countries. In such circumstances, a rise in the price of staple foods causes severe problems of family nutrition.

Village production

140. It is logical to suppose that villagers, in response to this situation, would be even more interested than in the past in village-level food production for family needs. Government actions to help

---

53/ A brief review of the effect of inadequate food and nutrition is given in chapter I, paras. 28-34.

them could include:

(a) In countries with population pressure, wherever there are numerous families without access to land, arranging for communal or individual allotments for food cultivation;

(b) Widening the scope of agricultural extension services, which have often been concerned only with cash crops for export, to advise on family food production. The assistance available from agricultural banks and co-operatives may need to be similarly widened;

(c) Using information media to alert and educate the population.

Village storage

141. Another aspect of immediate concern to villagers is food preservation and food storage. Ten to 20 per cent of their food is frequently lost between harvests.[54/] This contributes to the "hungry months" before the next harvest comes in, which are a period of particular difficulty for the young child. Technical and material help in this field could be one of the faster ways to increase village-level food supply. There is a large gap between what could be done and what is being done to improve storage at the farm level. Suitable procedures that are both technically and economically feasible can be developed and the extension worker must be convinced of the profitability of adopting them before he offers them to the villagers.

54/ Handling and storage of food grains in tropical and sub-tropical areas, FAO Agricultural Development Paper No. 90 (Rome, 1970). Food storage manual, (Rome, World Food Programme, 1970); Tropical Stored Products Information Reports, No. 20 (1970) and No. 24 (1973) (London, Tropical Products Institute). The Malawi case study reports a 20 per cent loss of food staples because of storage difficulties.

Applied nutrition

142. UNICEF, FAO, and WHO have been assisting projects to encourage local and family food production especially for the requirements of children and mothers, under the name of "applied nutrition", in some 60 developing countries.[55/] In many of these, they have remained at the pilot level, recognized as correct in principle but often needing revision in implementation. Applied nutrition is an application of community development and has suffered from a certain discouragement in that field in recent times. A general problem seems to have been that such schemes were correctly introduced as a supplement to the government food policy, but often without any local consultation or local participation in the design of the projects. Many of the foods chosen for introduction at the village level (milk, eggs, poultry, fish) were too costly for the villagers to eat and, for the most part, could only be sold, bringing a useful addition to income but contributing only indirectly to family nutrition. An Indonesian evaluation suggests that food legume and maize production should come well before promotion of animal protein sources in that country.

Weaning foods

143. There is some demand for weaning foods, more in urban than in rural areas. That breast-feeding should be encouraged is discussed below, but from the age of four to six months on there is a need for adding other food. Milk powder and other commercial children's foods are too expensive for most families, but they may buy small quantities and dilute them, a practice that causes a significant proportion of the cases of undernutrition. To help meet this situation a number of countries have launched the production of a weaning food that could be sold at a lower cost, based on cereal-legume mixtures

---

55/ Planning and Evaluation of Applied Nutrition Programmes, FAO Nutritional Studies, No. 26 (Rome, 1972).

(Algeria, Colombia, Egypt, Guatemala, India, Iran, Morocco, Tunisia, Turkey). UNICEF, FAO, WHO and the Protein Advisory Group of the United Nations System (PAG) have done a good deal of work to assist this.[56/]

144. As mentioned above, the main market is likely to be in urban areas, and to reach needy families, the weaning foods have to be put on sale through health centres, pharmacies, co-operatives, low-price food shops, etc. at a price subsidized by the Government.

145. The needs of more families can be met, especially in rural areas, by helping mothers to prepare weaning mixtures from foods available to her. This is partly a question of education. The PAG has published a manual on feeding infants and young children[57/] which provides basic information to workers in developing countries for working out appropriate recipes and educational programmes. The health services need to train and employ suitable personnel at various levels and to provide essential support for this work, including kitchen units for recipe development and training. Suitable low-cost utensils, for example, sieves, should be provided for demonstration centres and made available in the markets. The difficulties of home cooking and milling some legumes, especially soybeans which are the most nutritious, can be greatly reduced through installation of village grinding mills (see para. 202).

56/ Max Milner (ed.), Protein-enriched Cereal Foods for World Needs, (St. Paul, American Association of Cereal Chemists, 1969); B. Wikstrom, Marketing of Protein Rich Foods in Developing Countries, New York, PAG Guideline No. 8, "Protein-rich mixtures for use as weaning foods", PAG Bulletin No. 12, 1971; E. Orr, The Use of Protein-rich Foods for the Relief of Malnutrition in Developing Countries: an Analysis of Experience (London, Tropical Products Institute, 1972) (Publication G73).

57/ M. Cameron and Y. Hofvander, Manual on Feeding Infants and Young Children (New York, PAG, 1971).

146. In addition to wanting more food, villagers are interested in obtaining treatment for children who are ill from malnutrition. The causes are usually not recognized, and approaches to this are discussed below in the section on health (paras. 150-190).

Primarily government responsibilities

147. Food and nutrition policy. A basic government responsibility is to have a comprehensive national policy for food and nutrition. This policy should be not only for the population as a whole, but take account of the proportionately greater needs of growing children for food and for protein, vitamins and minerals.

148. Food supply, food demand and biological utilization of foods, represent the three macro-variables to be taken into account in the formulations of a national food and nutrition policy. In the general framework of such a policy, special measures would be proposed for dealing with the particular problems of vulnerable groups. The supply of protein foods (which at the economic level of the lower socio-economic groups would be mainly food legumes) together with vegetables and fruits, are of special interest for infants and young children. Among other instruments, a food and nutrition policy would include: agricultural research; the widening of agricultural extension services to include food crops as well as cash crops; access to land for garden plots; storage, transport and marketing; consumer education, especially for new arrivals in urban areas; and low-cost food shops and other measures such as food distribution centres to help low-income groups increase food

/...

consumption. This report does not discuss these measures.[58]

149. Prevention of specific deficiencies. Local communities cannot be expected to initiate preventive action against nutritional deficiency diseases, the causation of which may not be fully known to them. This, however, is a very fruitful and economic field of action for governments to follow through their ministries of food and agriculture, health, and possibly others. The most important deficiencies relate to protein-calorie-malnutrition, deficiencies of iron (anaemia), vitamin A (eye lesions) and iodine (goitre).[59] It usually depends on the Ministry of Health to take the lead in actions for the prevention of these deficiencies and therefore they are included in the next section. However, there are actions

---

58/ Further discussion of the main components of a food and nutrition policy may be found in: A. Berg, The Nutrition Factor, Its Role in National Development (Washington, D.C., The Brookings Institution, 1972); Provisional Indicative World Plan for Agricultural Development: a synthesis and analysis of factors relevant to world, regional and national agricultural development, (FAO document C69/4 and its accompanying regional studies); Report of Second Regional Seminar on Food and Nutrition sponsored by FAO, WHO, UNESCO and UNICEF, (Beirut, UNICEF, 1973); Elements of a Food and Nutrition Policy in Latin America, Scientific Publication No. 194 (Washington, D.C., PAHO/WHO, 1970); Interagency Consultative Meeting on National Food and Nutrition Policies in the Americas, (ECLA, FAO, WHO/PAHO, UNESCO, UNICEF), Santiago, March 1973 (document SIAC/PNAN-1); West African Conference on Nutrition and Child Feeding, March 1968, sponsored by the Republic of Senegal and US/AID, with the participation of FAO, OCCGE, WHO and UNICEF; Eastern African Conference on Nutrition and Child Feeding, May 1969, sponsored by the Republic of Kenya and US/AID, with the participation of FAO, WHO and UNICEF (Washington, D.C., United States Government Printing Office); Third African Conference on Nutrition and Child Feeding, May 1970, sponsored by the Republic of Tunisia and US/AID, with the participation of FAO, UNDP, WHO and UNICEF, (Atlanta, United States Department of Health, Education and Welfare).

59/ Joint FAO/WHO Expert Committee on Nutrition, Eighth Report, WHO Technical Report Series, No. 447 (Geneva, 1971).

in which the support of food planning and agricultural extension is required, such as cultivation of food legumes and certain fruits and vegetables and the fortification of staple foods with protein sources, iron or vitamins. India for example fortifies some of the wheat flour sold in the fair-price ration food shops with groundnut or soybean flour.

Health[60/]

150. In accordance with the general plan of presentation, this section begins by considering the health problems of largely unserved areas. The country is assumed to have a ministry of health hospitals in the capital and some towns; district or provincial health offices, usually not well staffed for child health work, but performing some functions with general coverage, e.g. epidemic control, smallpox immunization; and a number of health centres, each serving a surrounding area. The starting point of this section is the areas that are too far away from health centres for mothers to bring their children regularly.

60/ A brief review of health needs, other than nutritional needs, is given in Chapter I, paras. 35-44. As indicated in para.258, WHO and UNICEF have in preparation a study on the various means available for the extension of health services to disadvantaged areas, which will be available to the Executive Board at its 1975 session. Although it has a wider focus than the young child, its contents will give a more thorough treatment of the subject than can be offered here. General recommendations on maternal and child health in developing countries are contained in D. Morley, op. cit. For social paediatrics in general see R. Mande, N. Masse and M. Manciaux, Pédiatrie Sociale (Paris, Flammarion Medecine-Sciences, 1972).

151. It is assumed that the country wants to expand its services to mothers and children in unserved areas, and that it will use the existing structure as a base for this expansion. The discussion covers first the services about which people are likely to be more conscious of need, and in which they may be ready to participate. It then goes on to describe the services in which the initiative for development would lie with the central government. The actual order of growth of services would include elements from both of these categories.

152. The section assumes that the Government would set this growth in a perspective of some 20 years. It would expect during that time to expand the work of the different levels - district office, health centres, and sub-centres or maternal and child health centres - each one expanding its different appropriate responsibilities. It is also assumed that any component which the ministry decided to add to its services in this process of growth would be valid for a certain period, say 10 - 20 years. After that, it could be revised and replaced by more elaborate services. Organizational arrangements needing revision in less than 10 years would usually introduce too many problems of direction, supervision and training.

Maternity care

153. Health is one of the most genuinely felt needs of people, at least in the form of treating disease. Therefore, traditional systems have long been established to provide health care. First and foremost among these traditional systems is assistance to maternity cases. Among the important factors on which this "felt need" is based is neonatal mortality (during the first 28 days of life). It may account for a substantial part of the mortality

during the first year of life, and much of it is related to delivery practices, e.g. tetanus neo-natorum.[61/] Poor obstetrical practices also cause maternal mortality.

154. In various forms help for delivery is available in all communities around the world. With it often goes experience and advice on children's health. On the other hand, incorrect practices and ignorance often turn this help into a danger.[62/] Nevertheless, the individuals who discharge this type of function, generally older women, can be a valuable resource for the community. They are respected and listened to by the majority of younger mothers.

155. Therefore, some countries try to improve the skills of the traditional providers of maternity and child care, not only to minimize possible dangers but, in fact, to turn them into a positive asset. Depending on their training, traditional birth

---

61/ The Prevention of Perinatal Mortality and Morbidity, Report of a WHO Expert Committee, WHO Technical Report Series, No. 457 (Geneva, 1970). J.E. Gordon, H. Gideon and J.B. Wyon, "A field study of illnesses during pregnancy and their management and pre-natal care in Punjab villages" Indian Paediatrics, Vol.2, No. 9, (Sept. 1965), pps. 330-335.

62/ The Thailand country case study shows that in the rural regions 89.4 per cent of deliveries take place in the home, and only 8.6 per cent of births are hospital deliveries. Country studies for the Lomé conference point out that in Central and West Africa, women have to continue the strenuous physical exertions and long journeys entailed by their roles as producers and mothers right up to the day of delivery. A considerable proportion of the women (43 per cent at best, 95 per cent at worst) give birth alone, outside of any health facility, in the traditional manner, assisted by a female relative or midwife. The studies stressed the drawbacks of these traditional methods from the point of view of the well-being of mother and child and possible hazards, such as umbilical tetanus, puerperal infections and complications during delivery (dystocia). The studies showed that only people living in the immediate vicinity of rural health posts or hospitals with maternity wards, in major towns were able to avail themselves of their services. Lomé conference report, op.cit., p. 19.

/...

attendants can, in addition to providing more hygienic delivery, stress the importance of nutrition to the expectant mother, encourage continued breast-feeding, provide information about family planning and recognize and refer complicated cases to maternity or hospital clinics.

156. Training programmes for traditional birth attendants can be arranged out of local health centres. They may range from a course of one-day weekly visits to the health centre to six months of full-time work in a centre. Such training has been given extensively, for example, in Indonesia, Pakistan and Thailand. For those who completed training a "graduation certificate" was awarded in the form of a very simple "midwifery kit" containing scissors, alcohol for sterilizing, a sterilizing dish, waterproof sheet and soap. The replacement of consumable items offers an opportunity for encouraging the traditional midwives to keep in touch with the centre.

157. In Senegal and Mali some communities have gone a step further by constructing with government support, a group of traditional houses to serve as a rural maternity centre for a group of villages. Villagers were invited to choose a younger woman in the 35 - 45 age group for training as their village midwife. The village midwives arrange a roster so that two or four are always in attendance, and it is easier for the health centre personnel to help them in case of need.[63/] Going to a rural maternity also gives the mother several days rest. Similar arrangements are also found in East Africa.

158. As financial resources and availability of people for training increase in the community, there will be a transition to the use of

---

63/ A. Sanokho, A. Korle, M.N'Diaye and V. Dan, "Activités essentielles dans une structure de base de santé publique" Courrier, vol. XXIII No. 5, Sept.-Oct. 1973 (Paris, Centre International de l'Enfance).

auxiliary nurse/midwives or midwives. The growth of private maternity hospitals in some areas shows the value which women attach to these services. It may be preferable, however, to arrange for delivery facilities in health centres, which offer the community more than maternity care.

Sick children

159. The most frequent children's diseases are epidemic or endemic diseases (e.g. malaria), diarrhoeas, respiratory illnesses and malnutrition. It is useful to find out their relative priority in each zone of the country. However, the following paragraphs do not try to follow any commonly found order of incidence and gravity; rather in accordance with the general concept of this report, they follow a commonly observed order of importance in the eyes of the local community.

160. Just as many pregnant women use traditional midwives for delivery, they go to practitioners of indigenous medicine in case of sickness either because they are too far away from the health services, or because they have more confidence in the traditional healers. Some health services are trying to improve the situation by bringing these practitioners into some form of co-operation, and to improve their knowledge of drugs, of hygiene and of prevention.

161. Simple specific drugs. The availability for sale of modern drugs even in remote places shows the value which people attach to them. This service can also be upgraded by what some countries call the "rural pharmacy" as in Mali and Senegal or the "barrio drug store" in Cebu, Philippines.[64/] In fact the production of specific drugs means that it is possible for a community to treat a considerable proportion of the cases arising in an area with no

---

64/ Mali and Senegal case studies.

more than ten drugs all of which can safely be put in the hands of lay people.[65] The Government can supply such pharmacies more cheaply by supplying generic rather than brand-name drugs, as is done in Niger, and is now being introduced in Pakistan. The "pharmacy" can be run by a co-operative society, in association with the post office, in a school, or in any other village institution. It can also serve as an antenna of the regular health services by advising serious cases to go to the nearest health centre or hospital.

Extension of health centre network

162. As more resources become available, the community may be ready to contribute to extending the network of health centres or sub-centres.[66] As a development from the conclusions of the Bhore report made in India in 1946, a pattern of one primary health centre and three subcentres has been widely recommended.[67] However, the

---

65/ Such a rural pharmacy could contain:

i. Medication for endemic disease(s) (typically, this would be an anti-malarial costing 3¢ per treatment);
ii. Some vitamins and iron tablets (a twelve-month course of multivitamin with iron costs 40¢, iron and folate only about 18¢);
iii. An antibiotic for dealing with diarrhoea, fever and respiratory infections. (There is now a wide-spectrum antibiotic, tetracycline, for all such purposes, costing approximately 15¢ per treatment);
iv. An ointment for skin diseases (6¢ per ounce in ointment box);
v. A drug for expelling intestinal parasites (Piperazine is safe for self medication, and will expel many though not all types of parasite; 6 tablets per treatment costs 1¢);
vi. Aspirin (one-tenth of 1¢ per tablet);
vii. Contraceptives (2¢ per condom);

66/ The Organization and Administration of Maternal and Child Health Services, WHO Technical Report Series No. 428 (Geneva, 1969).

67/ Report of the Health Survey and Planning Committee, Vol.I, Government of India, Ministry of Health.

recurring costs and the requirements of physicians for the health centres have slowed down the extension of this system. Hence some countries are now considering many more subcentres, which would be under the charge of a woman auxiliary, e.g., in India, the auxiliary nurse-midwife (ANM) and visited regularly (every week) by medical and health personnel from the health centre. When local people are selected for training for auxiliary service, there is more likelihood that the trained person will stay, whereas it is difficult to recruit urban residents to work in rural areas. One model of a rural health service would have as many as 25 subcentres round the health centre.[68/] Through the multiplication of subcentres, maternal and child health centres and "under-five" clinics it is possible to extend the coverage of health centres widely. An important aspect in the context of the present report is that this opens the possibility of beginning pre-natal care with at least one check-up during the second trimester of pregnancy, advice on diet, etc.

163. "Under-five" clinics. Some countries have organized "under-five" clinics to provide the child care functions of a maternal and child health centre. They give low-cost curative and preventive care to as large a proportion of the young children as possible, substantially through health auxiliaries.[69/] They monitor weight in relation to height and educate mothers through the use of a

---

68/ Comprehensive Family Planning Based on Maternal/Child Health Services: A Feasibility Study for a World Programme, Studies in Family Planning vol. 2, No. 2 (New York, Population Council, 1971).

69/ See D. Morley, op.cit., chap. 19; Health care of children under five, Workshop on Health Care of Children under five under the auspices of the Nutrition Sub-Committee of the Indian Academy of Paediatrics, the Institute of Child Health, Niloufer Hospital, Hyderabad, and the Co-ordinating Agency for Health Planning, New Delhi; (Bombay-New Delhi, Tata McGraw-Hill, 1973).

/...

growth chart (paragraph 188), give immunizations and simple medical care. "Under-five" clinics may be related to the network of health centres.

164. Tanzanian example. The Tanzanian case study gives an interesting organizational pattern. The second Five-Year Plan (1969-1974) starts a process of extending the rural network which by 1980 is to provide one rural health centre for every 50,000 of the rural population, and one rural dispensary for every 7,000, so that 90 per cent of the rural population will live within 10 km. of one or the other. This network is being staffed by medical assistants rural medical aids, nurses, and a new cadre of 2,600 maternal and child health aids. There will be two of the latter at each health centre, one at each dispensary. They are selected from local girls aged 16-20, with primary schooling, and given 12 months at a training centre, and 6 months field work. They give pre-natal and post-natal care, conduct normal deliveries, conduct child health clinics, give health and nutrition education and provide child-spacing services. The Tanzanian country case study says "The outline of the MCH plans described show that the Government intends to tackle the problem from the bottom up. There exist many more complicated aspects which also require attention - but the establishment of a basic service available to all comes first".

165. Home visiting. A further development is to establish a corps of rural health workers who will be sufficiently numerous to visit every house, sometimes as often as once a month, as is now being done in Bangladesh. A number of countries are retraining their malaria workers for this purpose (e.g. Central America). This opens wide possibilities for very simple health services, immunizations, health and nutrition education and simple family planning services.

At the same time, it is necessary for the Government to strengthen the organizational structure to provide supervision, training and supplies.

166. Diarrhoeas and dehydration. It was mentioned above that diarrhoeas are the most frequent illnesses of children. Through dehydration of the child, they are often fatal. Yet if caught before the terminal stages, simple methods of treatment are available. This situation offers a very important opportunity to improve child care and reduce mortality. In the earlier stages, oral rehydration may be carried out at home[70/] with a simple mixture of clean water, salt and sugar, sometimes with orange juice. For mothers who do not yet know how to do this, such treatment can also be given very simply at maternal and child health centres.[71/] In more advanced cases or when there is serious vomiting, the liquid may have to be given intravenously in hospital or "hospital-like" facilities (it then has to be sterile and free of pyrogens, and the quantity for one treatment costs about $1). The accompanying infection is treated by the use of an appropriate drug such as tetracycline. Once rehydration is accomplished and vomiting is under control, refeeding should be undertaken and the child should be back to a normal diet within a week.

167. Family planning services. Relatively educated women generally want information and help about spacing of births and number of births; women who are unaware that spacing of births is possible need to know about the possibilities of help. This, in turn, makes

---

70/ D. Morley, op.cit., chapter 10.

71/ M. and F. King, D. Morley, and L. and A. Burgess, Nutrition for Developing Countries (Nairobi, Oxford University Press, 1972).

a big contribution to child health and development. Wherever it is in accord with national policy to meet this need, it is most naturally done as part of maternal and child health services. The convergence of community and national interests offer the opportunity for establishing many more subcentres staffed by auxiliary nurse-midwives, able to give basic MCH services and family planning advice. Through helping parents to care for their children, the MCH services strengthen the motivation towards responsible parenthood.72/

Immunizations

168. We turn now to actions depending primarily on the central government, for which not much community initiative can be expected during the early years of the programme - though, of course, some community understanding is essential to success. Immunizations offer the best example, and one that is very widely applied is in the case of smallpox. They provide a major instrument for the reduction of death and handicapping of children and should be given for this purpose whenever it is possible, rather than waiting until the whole country would be covered, even though it is only at that stage that control of the disease as a public health problem becomes possible.

169. Chapter I has described the needs and the main limitations on coverage (paras. 35-38). The points below relate not so much to the cost of the vaccine as to the delivery system.

(a) Health centres. For the 10 per cent of children within reach of health centres, a full programme of immunization is possible, provided mothers are persuaded

---

72/ Family Planning in Health Services, WHO Technical Report Series No. 476 (Geneva, 1971); Erhard Eppler, Wenig Zeit für die Dritte Welt (Stuttgart, Kohlhammer, 1972), chap. 3.

/...

to bring their children. In order to extend the radius of coverage, health services are looking for mobility around health centres or district health centres. The staff of the centre then go out to surrounding villages to give the programme of immunization.

(b) Vaccinators. The range may be further extended by using vaccinators, who are auxiliary workers and can be increased in number without too heavy budget changes. There are limitations on the kinds of vaccination one vaccinator can give, and technical limitations on the conservation of some vaccines.

(c) Mobile teams. Where there is a low density of health services, in order to secure high coverage of immunization, to safeguard vaccine potency and often to work in difficult environmental conditions, it is likely that a campaign by mobile teams working out of district health offices may be the only approach feasible at least initially. This, however, often encounters two difficulties - staff are unwilling to keep on the move month after month, and the operating cost of the transport is too heavy a burden on the health budget.[73/]

(d) "Cold chain". In addition to the problem of bringing the child to vaccinating personnel, some vaccines require special handling - usually low temperature or protection from light up to the point of injection. The provision of a chain of refrigerated depots reaching into rural

---

73/ In rural areas of the United Republic of Tanzania, district nutrition teams visit villages at monthly intervals providing health education, vaccination, minor treatment and food supplementation (Tanzanian case study).

areas may represent a capital investment that is considerable in regard to the health budget. Despite these various difficulties, it is usually very much worthwhile to extend the coverage of vaccinations.

170. Measles. It could be especially worthwhile to expand measles vaccination. Chapter I has shown the terrible effects of this disease (para.36). Vaccination is effective, and records of a dramatic reduction of deaths from measles are available, for example, from Chile and Hong Kong. The Pan-American study of Patterns of Mortality in Childhood, op.cit., speaks of "the great need for additional vaccination programmes in the Region" (p.59). The vaccine has come down in price in recent years, and in 1973 was about 20 cents per dose. Measles vaccine needs low temperature, so extra costs are also required for storage and handling. In many circumstances, extra personnel would also be required. Nevertheless, it appears that these extra costs would be justified by the major contributions to protection of children.

171. Polio. Polio vaccine has now come down in price to almost $.075 for the three doses required; as for measles, the vaccine is delicate and a cold chain is needed. An extension of polio vaccination would be recommended.

172. Other communicable diseases affecting children. A wide approach similar to that discussed above for immunizations, and with similar problems of delivery, can also be applied to the prevention and treatment of communicable diseases affecting children, such as trachoma, and a number of other diseases important in specific regions, e.g. cerebro-spinal meningitis in West Africa, Japanese encephalitis in some areas of Asia.

/...

Health and nutrition education

173. Health and nutrition education should be a component of all services. An educational drive is particularly needed where the network of services is slim, and people have to be prepared in case of need to walk considerable distances to use them. Health and nutrition education are closely related to the need for popular participation (chapter II, paras. 96-99). In particular, it is necessary to involve the community leaders in any educational effort. There should be co-operative action at the local level among the services in health, agricultural extension, community development, and education, to produce consistent messages from different services rather than possibly conflicting advice. Greater support of health education as a component of services is now being sought in many programmes through the development of project support communication.74/

174. In the past, the effect of health education campaigns as such was often disappointing even where they had a good information content, well adapted to local conditions. However, communication and awareness of the external world are now much more evident in most communities than they were 20 years ago. Readiness to change has increased, spurred on by the observation of the advantages of certain measures. One of the most obvious examples in the field of health is the change of attitude of most populations towards immunization. Vaccines that were refused and resisted only a few years ago are now eagerly sought by the same people. Therefore, it is time that educational measures be reconsidered and employed widely, possibly by putting them in the hands of the people themselves and by following the main health priorities, which is the point of

---

74/ King, Morley, Burgess, op.cit., affords an excellent example of teaching material prepared so that paramedical and auxiliary personnel can do effective health education.

view taken in the sections of the present report relating to the services themselves. The effectiveness of these measures has been largely proven by those few countries that have employed them.

175. Environmental sanitation may also be tackled more successfully by involving community leaders. Excreta disposal and disposal of rubbish and prevention of accumulation of pools of water or other breeding places for disease vectors are extremely important objectives, which can only be realized with popular participation. In line with these views, the provision of latrines is discussed in this report as an element of home improvement (paras.204-205).

176. Also related to health and nutrition education are literacy campaigns for women, with appropriate content, and the review of the curriculum for girls in school (see paras. 191-197).

Prevention of nutritional deficiency diseases

177. The following widespread nutritional deficiencies can be simply prevented, insofar as there is a means for reaching the mother and children:

(a) Anaemia. Deficiency of iron and folate is very widespread during pregnancy. In areas determined by the health services to have a high prevalence of anaemia because of deficiency of iron or folate, or both, (i) tablets can be made widely available for daily use during pregnancy and lactation, (ii) since deficiency of iron also affects young children, particularly when they are infected with hookworm or trichuris, smaller dosage tablets can also be made available for them.[75/]

75/ Nutritional Anaemias, WHO Technical Report, Series No. 503, (Geneva, 1972) gives technical information, including the recommended dosages.

The cost of iron and folate are minimal: the iron for a woman for twelve months costs about fifteen cents, with folate the cost is about eighteen cents. Again the key element is the delivery system - how to bring the women in touch with the health services or other distribution network. Wherever the network exists, it should have stocks of iron and folate. The anaemia problem is tackled in some areas by fortifying processed foods with iron; the technology has to be suitable for the food being used. In India the fortification of salt with iron is being studied.

(b) Vitamin A deficiency in large areas of the world creates a risk of blindness in young children. This can now be prevented by distributing every six months a large-dose (200,000 I.U.) capsule of vitamin A to children under five years old[76/] until nutrition education has convinced parents of the need to include in their children's diet sufficient dark green leafy vegetables or orange and yellow vegetables or fruits, (foods rich in vitamin A or carotene). The cost of the capsule where there is a delivery system available is one cent, or two cents per child per year.

(c) Goitre can be prevented by iodization of salt, wherever salt is centrally processed, at a cost of about four cents per inhabitant per year. Otherwise, intramuscular injection of iodized oil is being tried in several

---

76/ For technical information see Prevention of Blindness, Report of a WHO Study Group, WHO Technical Report Series No. 518 (Geneva, 1973).

countries.[77] The injection lasts for several years, and costs about seven cents, plus the cost of the delivery system.

Treatment of severe protein-calorie malnutrition

178. Parents naturally want treatment for children ill with severe malnutrition, although they may not recognize the cause of the illness. This was not listed above among the actions in which the community would participate because of the high technology required and the high cost of nutritional rehabilitation. Children suffering from cases of kwashiorkor or marasmus are in danger of death and they need to be sent for immediate treatment. In a hospital malnutrition ward, a three-week treatment of kwashiorkor will cost not less than $50, and a three-month treatment of marasmus not less than $200.[78] At the same time, for good long-term results, it is essential to provide for the education of the mother about how to feed her child and for follow-up by home visiting after the child is discharged from the hospital.

179. Nutrition rehabilitation centres. Some cheaper methods are coming into more extensive use through nutrition rehabilitation centres. They can successfully handle the majority of cases, exceptions being where there are also serious infections requiring hospitalization, where intensive feeding procedures are required or where there are other serious complications. Usually the centres are of the day-care type (a mother and child attend a centre daily for about three months) and the cost (50-75 cents per

---

77/ Endemic Goitre, WHO Monograph Series No. 44 (Geneva, 1960), Endemic Goitre, Report of the Meeting of the PAHO Scientific Group on Research in Endemic Goitre held in Puebla, Mexico, June 1968 (Washington, D.C., PAHO/WHO, 1969).

78/ The costs are based on experience in Bombay.

child per day) is about one tenth that of hospital treatment.[79] This method is being used in some 20 countries, including Costa Rica, Haiti, India, the Philippines and Uganda.[80] The community can make important contributions to establishing and operating the centre.

Dealing with moderate forms of malnutrition

180. It is, of course, better for the child, and for the case-load of the treatment facilities which are generally insufficient, if measures of prevention can stop children who are malnourished from actually declining into a state of severe malnutrition. Preventive measures to be undertaken outside the health services were discussed above in the section on food and nutrition (paras. 138-149).

181. The medical services may tend to restrict themselves to treatment of malnutrition through medication. A classic field study by the Institute of Nutrition of Central America and Panama (INCAP) in Guatemala has demonstrated the generally better results from supplementary feeding and nutrition education, compared with medical care.[81] Of course the objective is to combine the two.

79/ Nutrition rehabilitation centres are described by J.M. Bengoa in "Nutrition Rehabilitation Programmes" in Session III of D.B. Jelliffe and E.F.P. Jelliffe, eds., Nutrition Programmes for Pre-school Children (Zagreb, Institute of Public Health of Croatia, 1973). See also "Nutritional Rehabilitation Centres" PAG Bulletin, Vol. III, No. 4, Winter 1973 (New York, PAG), and A Practical Guide to Combating Malnutrition in the Pre-school Child. Nutritional Rehabilitation Through Maternal Education, report of a working conference on nutritional rehabilitation and mothercraft centres at the National Institute of Nutrition, Bogota, Colombia, (New York, Appleton-Century Crofts, 1969).

80/ The Therapy of the Severely Malnourished Child: a practical manual (Uganda, National Food and Nutrition Council of Uganda, 1973).

81/ N.S. Scrimshaw, M. Behar, M.A. Suzman, and J.E. Gordon, "Nutrition and Infection Field Study in Guatemala Villages 1959-1964" in Archives of Environmental Health, vols. 14, 15, 16 and 17 (Chicago, American Medical Association). See also statement by N.S. Scrimshaw, Chairman of the PAG, to the 1972 session of the UNICEF Executive Board, document E/ICEF/CRP/72-35.

/...

The control of infectious disease can do a great deal to prevent the occurrence of severe malnutrition, but a proportion of young children and pregnant and lactating women will still be in need of more and better food. Government policies on food production and marketing, price controls, etc. can help bring nutritious foods within reach of lower income groups, and families can often do more to produce their own food, but supplementary feeding programmes will still be needed for some. The health services should play an important role as a channel of distribution, even though coverage may be limited at present.

182. Depending on the work load and the existing staff, it may be necessary to add an auxiliary worker, perhaps an auxiliary nurse-midwife. In effect, this may be a first step towards an under-five clinic or maternal and child health clinic. Some feeding may be done at centres and sometimes various locally produced foods can be used (this, in fact, is a key feature of practical nutrition education of mothers), but in many places the method of choice will be take-home distribution of cereal-based mixtures fortified with food legumes, minerals and vitamins as found in Balahar (India), Incaparina (Guatemala), Superamine (Algeria) and Sekmama (Turkey). For reasons of cost,[82/] distribution of these mixtures in a poor country generally reaches a small number of the children at risk, perhaps as low as 5 per cent; this number may be increased as the country's resources expand. The onerous task of selection is done on the basis of serving cases as indicated by age/height/weight and oedema. Shortage of food to distribute means greater dependence

---

82/ The India country case study reports that Tamil Nadu budgets a little over 80 rupees per year ($US 12 approx.) per young child per food supplement; more than half a million children are reached through a variety of channels.

on local foods, and the centre demonstrates to mothers how to prepare them for young children. It also drives some centres into measures of agricultural extension in the surrounding community.

183. Supplementary feeding in pregnancy and lactation. Probably the majority of pregnant and lactating women in developing countries have inadequate dietary intakes of calories, protein and certain vitamins and minerals, especially vitamin A, folate and iron. The relatively high proportion of low birth-weight children in developing countries contributes to mortality, morbidity, and handicapping conditions in the first years of life. Birth-weight, which is a key factor in the health status of the new-born, is directly related to the nutritional status and health of the mother during pregnancy. In some developing countries, the low birth-weight rate exceeds 25 per cent, as compared to 6 per cent in the industrialized countries.

184. Ideally, supplementary foods should be available, if needed, beginning at the start of the second trimester of pregnancy, and continuing during lactation. Supplementary feeding during pregnancy protects the health of the mother, prevents low birth-weight and gets the infant off to a better start. However, cost considerations will usually limit distribution to the most needy cases, in the same way as for children suffering from moderate malnutrition. Commonly, the first steps to meet this need consist of making available only vitamins and minerals for distribution out of health centres, but it is highly desirable to go beyond this and include food supplements if resources are available.

Encouragement of breast-feeding

185. To reduce the child malnutrition caused on a large scale by the spreading practice of early or incorrect weaning the following general steps may be taken:

(a) Study of causes. WHO, in co-operation with the International Children's Centre, is developing a collaborative global research programme on factors involved in the decline of breast-feeding. Each country needs to make some study of the factors applicable to its own population.

(b) Orientation of medical and health personnel. Health services have commonly given little attention to encouraging mothers to nurse their children. There is great need for training and orientation of medical and health personnel in this regard.

(c) Education of the public. In some respects, education has been negative through inappropriate advertising and promotion of formula foods. The PAG has held conferences with paediatricians and the infant food industry to promote co-operative action and encourage breast-feeding. Such measures need to be considered. The mass communications media should also be used.

(d) Support for nursing mothers. For working mothers, and particularly those in wage employment, a crèche is needed on the job. Supplementary feeding for nursing mothers was discussed above in paragraphs 183-184.[83/]

Surveillance of nutritional and health status

186. We pass now to two measures of great importance, but of even less direct and visible interest to the communities served. The first is a simple system of surveillance of nutritional status. For maximum protection of communities and individuals through the

---

83/ M. Cameron and Y. Hofvander, Manual on Feeding Infants and Young Children, (New York, PAG, 1971), Chap. 4.

use of limited resources it is necessary to monitor nutritional status to (a) identify those at risk (early warning) and to (b) identify those already seriously malnourished and in need of treatment.

187. For identification of communities and individuals "at risk", indicators (economic, social, environmental, etc. as well as biological) may be chosen on the basis of association of these factors with malnutrition in the locality in the past. This type of surveillance is at an early stage of development; it may be extended to include some surveillance of child health going beyond the nutritional aspects. Epidemics of infectious diseases such as measles, gastroenteritis and malaria can be expected to increase the prevalence of malnutrition.

188. Considerable experience has been gained in the use of anthropometric measurements such as height, weight, head and chest circumference ratios, arm circumference, etc., for identification of malnourished children. "Percentage of standard weight for age" has been widely used for identifying children with severe malnutrition (i.e. less than 60 per cent of standard weight) or with moderate malnutrition (i.e. 60-75 per cent of standard weight). Presence of oedema indicates severe malnutrition regardless of weight. Ideally, the height and weight of young children are measured regularly, say once a month, and recorded on a growth chart kept by the family. WHO has developed a growth chart for international use; it is now being tried out in 18 locations in developing countries. WHO and various investigators are also studying the possibility of using simple anthropometric indicators, such as arm circumference, or arm circumference in relation to height, for nutritional surveillance. The great interest of arm

circumference is that it may be used for children over one year of age without knowledge of the age of the child.[84/]

189. Where feasible, anthropometric measurements are supplemented with observation of clinical signs and biochemical tests. Where reliable mortality data exist a high death rate between one and five years of age is strongly suggestive of malnutrition as an underlying or associated cause.

Five key actions through health services to promote better nutrition

190. Although in this report the topics are taken up in a different order, it is useful to list five key actions that can be recommended to health services for improvement of nutrition:

(a) Surveillance of nutritional and health status - community and individual;

(b) Management of severe and moderate forms of malnutrition
   1. Treatment of severe malnutrition;
   2. Treatment and prevention of moderate malnutrition - prevention of deterioration in nutritional status:
      (i) Supplementary feeding;
      (ii) Supplementation with specific nutrients;

(c) Control of infectious diseases
   1. With immunizations;
   2. Control of diarrhoea;

(d) Nutrition education/demonstrations: family planning including promotion of breast-feeding and preparation and use of nutritious weaning foods;

(e) Co-operation with local agencies and channels; community preparation.

84/ King, Morley, and Burgess, op.cit., chap. 1-5.

Literacy and education of the mother and teen-age girls

191. We turn now to the support of the mother, and improving her status so that she can improve the rearing of her children and her contribution to the community.[85/] One of the most obvious means available is literacy training. This again is a service many people want and are ready to contribute to, but it requires organization by a governmental or a non-governmental agency, or a combination of both. Literacy training should be available to both parents. Stress is placed upon the mother and illiterate girls because the literacy of women lags far behind that of men in most developing countries. In the rural areas of some countries as many as 90 per cent of the women are illiterate.

192. A proportion of women are motivated to become literate to gain greater status, skills, and knowledge in order to improve the family's standard of living and their own child-rearing skills. Mothers are also motivated to learn to read as their older children bring school books into the home. Motivation is increased by classes which have recreational as well as educational values.

193. Literacy skills are retained only if they are used in one's job or daily living. This is why there is a great stress on functional literacy in which the content of the curriculum conveys important information to those attending the programme. In the past functional literacy has usually been related to an occupation or an employment. The Director-General of UNESCO sees it as having

---

85/ Paragraph 53, chapter I, discusses the extent of illiteracy.

a much broader role, as an introduction to lifelong education. The functional character of literacy instruction should not be interpreted in a narrow and strictly economic sense: the word "functional" means that approaches and methods are not derived from a preconceived model, but from an analysis of the concrete requirements, objective and subjective, of a given society. The aim, however, is always to enable the individual to take an active part in the life of the community and to modify it from within so that it can better reflect and satisfy his or her own aspirations and values.[86/]

194. Literacy training for women and girls should have a content relating to consumer information, housekeeping, health and nutrition education and child-rearing, as well as work they may do to produce food for the family or earn money through crafts. This approach is being tried in some areas of India and Egypt. In Andhra Pradesh (India), an experimental project in non-formal education has been launched for teaching literacy to rural women with an information content relating to health, nutrition, and family planning practices.[87/] At present, the project covers 48 villages.

195. Ministries of education, women's groups, co-operatives and other non-governmental organizations have developed various literacy programmes. Specific curricula have to be developed for different cultural and vernacular language groups. This requires a certain capital cost, which is small in relation to the large

---

86/ UNESCO Chronicle, vol. XIX, No. 11 (Nov. 1973), p. 404.

87/ An Experimental Non-formal Education Project for Rural Women to Promote the Development of the Young Child (New Delhi, Council for Social Development, 1972).

number of women to be reached. The recurrent costs are primarily to pay the salary of the teacher (who is usually an auxiliary), and to pay for materials. Costs per trainee may be $8 or more per year for about 250 hours, given during the off-peak season for agricultural work. It is also necessary to prepare follow-up reading material for the newly literate women and girls. This has a cost but it is also an opportunity for circulating educational material.88/

196. A most interesting approach is being followed in Colombia by using the radio and radio listening groups. Literacy is being taught to a large audience organized into local community groups monitored by volunteer personnel. This programme, Accion Cultural Popular, begun in 1948, and now reaches more than 200,000 radios.

New elements in school curriculum

197. Looking to the future, it is advisable to include in the school curriculum for both girls and boys teaching material covering health, nutrition, sanitation, psychological development and the role of mother and father. Thus, the primary school curriculum in Mali and Tanzania includes home economics, and in Malawi hygiene and agriculture.

88/ W.S. Gray, The Teaching of Reading and Writing (Paris, UNESCO, 1956); Practical Guide of Functional Literacy: A Method of Training and Development (Paris, UNESCO, 1972); P.H. Coombs, R.C. Prosser and M. Ahmed, New Paths to Learning for Rural Children and Youth (New York, International Council for Educational Development (ICED), 1973), presented to the UNICEF Executive Board in an earlier version as E/ICEF/L.1284; and chap. 2 of Building new educational strategies: to serve rural children and youth, presented in draft form by the ICED to the 1974 Executive Board session as E/ICEF/L.1304.

Home improvement and reduction of women's work

198. As was indicated in chapter I (paras. 54-64) there are real problems which limit the ability of women and girls to spend time with the family's young children, and to use opportunities which may be available for training and education. The many hours which they spend in drudgery, grinding or processing food by hand, transporting water over long distances, gathering fuel and making the trip to the market on foot carrying supplies, could be reduced by simple technological improvements or co-operative activities. While some progress has been made, a great deal more systematic attention should be given to developing and putting into wide use this type of labour-saving programme. Of course, to the extent that there is a greater sharing of the work by men, the excessive burden on mothers can be reduced.

199. Modern and not so modern technology has developed systems and devices for easing the physical demands on both men and women working in the rural areas. Agriculture has benefited from the development of the plough, harvesting, threshing and milling machines, irrigation pumps, trucks for transportation of crops to market, etc. In most of these cases, though, the impact has been at the level of the larger mechanized farms where there was an interest in saving on the cost of labour.

200. Similar application is necessary for reducing home and village tasks. More needs to be done to press forward research on intermediate technology, especially village-level technology. In countries where growing technical and engineering schools are concentrating their efforts in the direction of research and action related to the needs of their own countries, the lightening of

women's work could be given some attention. Some research is being done, but the results could be more widely disseminated, and put in effect as part of government-encouraged programmes.

201. Following is a list of the tasks performed by women which would benefit from improved hand-operated, animal-powered, or motor-powered intermediate technology. In some cases the tools to do these jobs have been developed, but need to be introduced into wider usage.

(a) Agriculture and preparation of produce for food

Planting - simple hand-operated devices to ease the back-breaking work of planting rice, potatoes, corn and other crops are available to a limited degree. Getting them to the people who need them is the bottle-neck.

Weeding and cultivating - simple hand-operated implements are available. Improving the design of traditional tools has been researched to some extent. Again it is a question of getting them to the people.

Threshing - there are a variety of foot-powered devices already available.

Grinding and milling - see paragraph 202

(b) Home improvements

Laundry - see paragraph 203.

Latrines - see paragraphs 204-205.

Home construction - improved ventilation and lighting make household duties less difficult and improve health.

Stoves - see paragraph 206.

/...

Extraction of cooking oil - several hand-operated and other slightly more sophisticated devices are now on the market, or can be made from plans which are available.

Food conservation - some improved methods can be introduced to avoid losses in the drying, salting and smoking processes.

Food storage - methods of storage of grains, pulses, etc. in the fields after the harvest to avoid waste are available. The same is true of the household storage of food staples (cereals, pulses, vegetables).

Sewing - the use of the foot-operated machine obviously is a great time saver.

Communications - transistor radios can be used for education/entertainment relieving the effort needed to travel great distances for information and long hours spent at inconvenient times in classes.

(c) Wood for fuel - see paragraph 207.

(d) Transportation

Mechanical - carts, wheelbarrows, bicycle-trailer, boats.

Animal - donkey, mule, bullock.

The paragraphs below comment on some of these items.[89/]

89/ Much useful information is given in Village Technology Handbook, revised ed. (Mt. Ranier, Md.) Volunteers for International Technical Assistance, Inc. (VITA). Also Tools for Agriculture, Intermediate Technology Development Group Ltd. (London, England, 1973) describes devices and suppliers.

Grain milling

202. The spread of commercial milling facilities indicates that they are wanted, and that with a little help they can be supported by the village economy. In the introduction of motor milling, it is important to avoid over-milling the cereal, which causes loss of minerals and vitamins. In rice-eating areas this phenomenon has been responsible for infantile beri-beri. There is also the added advantage of using the motor for other purposes as well, e.g. pumping water or operating a saw. An illustrative example of the reduction of women's work for a modest investment is described in an annex to this chapter.

Water supply and laundry

203. Providing access to safe water has been discussed earlier in this chapter (paras. 14-18). It is only appropriate to recall that it is a major contribution to lightening women's work. The first step is a well or public fountain. As the economic level rises, there will be more wells and pumps in family courtyards, or, in the case of a reticulation system, more house connexions. The village laundry is an important adjunct to the water system; washing becomes much more comfortable than when bending down to a pool or stream.

Latrines

204. The greatest killers of young children throughout less developed countries are diarrhoea and pneumonia. After six months, "weanling diarrhoea" increases until about 24 months, and exacerbates protein-calorie malnutrition. There is no vaccine and only non-specific measures of prevention are possible to reduce the risk of microbial infection, through control of the indoors and nearby environment. For the indoors, mothers need education in the day-by-day handling

of the young child on a floor of beaten earth. For the outdoors, means need to be provided for the sanitary disposal of excreta. This is also important in the reduction of worm infections.[90]

205. Latrines are necessary to maintain a sanitary home environment. The health services frequently provide cement blocks with a water seal, the cost being approximately $1 in 1973. The family usually provides the labour for the pit latrine. The main obstacle to their use is not their cost but rather traditional behaviour patterns which are not adapted to the denser population of villages and towns. Regulations about the provision and use of latrines have generally not been successful. Communal village latrines are usually dirty and unpleasant, and their use also conflicts with privacy. The main change will have to be cultural change through education and persuasion. Convenience is an important factor to be stressed, especially for women who need a latrine within the family compound.[91] Education on the relation between excreta and disease is also important. It is striking that a large proportion of schools have no latrines or washing facilities, and an opportunity to train the school generation is being missed.

Cooking hearths and stoves

206. Simply raising the level of the cooking hearth by means of sun-baked bricks reduces the amount of stooping by the women, and saves children from burns and scalds, which are the most frequent

---

90/ For technical information see E.G. Wagner and J.N. Lanoix, Excreta Disposal in Rural Areas and Small Communities, WHO Monograph Series No. 39 (Geneva, 1958).

91/ Simple but efficient designs of pit latrines are being popularized throughout the United Republic of Tanzania by the Ministry for Health and Community Development (Tanzanian country case study).

accidents. In many types of house, the reduction of smoke through ventilation or through a simple chimney is a contribution to comfort, and also to reduction of eye diseases.92/

Fuel

207. In many places fuel-gathering ranks with carrying water and milling cereals as one of the major time-consuming tasks of women. This is a very difficult problem to solve until the economic level rises sufficiently to allow the use of kerosene. The Lomé conference suggests that villages should set aside an area of land for quick growing bushes or trees for the production of fuel.93/ This solution may well be less possible in areas of high population density.

Load carrying

208. The work of carrying loads can be reduced by a number of means, including the use of two-wheel carts constructed for pulling along foot paths. The ILO has helped a number of countries in designing such carts. At a higher level of family income the greater use of bicycles by women would be an important step forward.

Specific services for children

209. We turn to more specialized services which are normally developed on a larger scale as the economic level rises. The first of these relates to play and toys, which should have a place at all

---

92/ In Paraguay metal stove-tops are sold to families who build their own stoves, raised from the floor with clay bricks.

93/ Lomé conference report, op. cit., p.33.

economic levels but may receive more formal attention as children come together in day-care centres, playgrounds and other groups.

Play and toys

210. During his first three years, the child is beginning to understand and learn about the real world, its boundaries, its composition, and its relationship to himself. This is done through exploratory contacts by the child with others; the mother is a key element. Play is one of the significant ways in which a child learns and develops his motor ability, intellectual functioning, and socialization patterns.94/ This is not sufficiently understood, and in some places parents think that they should restrict the young child's play in the interest of his quicker development. In other cases it is restricted because the mother is overburdened, or for lack of space, or other material obstacles. Hence this subject needs to be included in educational programmes for parents on child rearing, in the training of personnel working with children, and in the school curriculum of older children.

211. Once it is accepted that play is part of the child's development, parents and personnel working with children will be ready to give some attention to providing playthings or toys. Through their shape, size, colour, weight, composition and function, they enrich the child's perception of his environment. They should be objects safe for the child to observe, play with, manipulate, and discard. They are tools for play and stimuli for perception; they are real objects that permit fantasy and imagination. Some natural objects

---

94/ O. Weininger, "Unstructured play as a vehicle for learning" in International Journal of Early Childhood (OMEP) vol. 4, No. 2 (Dublin, Irish University Press, 1972).

such as pebbles and sticks make very good playthings. Others can be made by the parents using local materials and by the children themselves as they get a little older. Materials usually available include clay, papier maché pulp, sawdust and glue, and water paste coloured for finger painting. Traditional cultures may offer interesting playthings, e.g. puppets. Toys should differ in their function and complexity so as to provide the child with the challenges of sensory motor activity, intellectual functioning, and development of symbolic thought.

212. As the child grows older the quality of play changes and songs and stories become very important for his development. There are different rules and the child learns to play co-operatively with other children rather than independently. As he approaches school age, he begins to separate thoughts from objects, and becomes more engrossed in his thoughts. Play continues the developmental tendencies of the child and permits him to reach beyond his present being. Play is an important part of day-care as it advances beyond a custodial service (see following paragraphs). Since few children are covered by day-care, measures to support play deserve separate attention.

Day care

213. The growing need for day care, especially for working mothers was referred to in paragraph 66 of chapter I. With formal day care presently available at best for only a few per cent of children in the age-group, other arrangements are often made by mothers who do not have the support of the extended family system. Children may be left with a neighbour, which is better than leaving them alone; day care can be arranged co-operatively by groups of mothers taking turns to look after children; day care may be provided by an untrained person

to whom the parents pay a modest fee. A substantial improvement in these systems may be obtained by offering simple training to women who give, or may be encouraged to give, "home" day care - older women who want to work with children. The possibilities of "play-centres" in villages, run by young women trained on a para-professional basis, and involving the participation of mothers and other family members could be explored. In some places group care of small children is arranged in farm communities during the harvest season.

214. It is also desirable at higher levels of national income to increase the capacity of formal day-care facilities, seeking to use models of organization in which the recurring cost is not above the capacity of the family and the community. The objective is to avoid purely custodial group care, which leads typically to the passivity of children, and on the contrary to use the opportunity to supplement the mother in fostering the development of the child. Day-care centres also provide an opportunity for parent education, but so far very few have been used in that way. Older boys and girls, with some training and with support from adults, could function as helpers and teachers. The developmental objectives for day-care centres should include cognitive development, socialization, development of curiosity, motor development, motivation of learning, and exposure to symbolic materials as books, pictures, and unusual objects. These objectives include a very important contribution to "pre-school education". On the other hand, the formal teaching of reading, writing, and simple arithmetic should not be encouraged for the reasons given in the next section (paras. 219-226).

215. Crèche. The crèche for infants and very young children is a special case of the day-care centre, in which even more care and attention is required. A crèche should be located near the mother

at work to enable her to continue breast-feeding, while day-care centres are usually located in the neighbourhood where families live. Larger industrial enterprises should bear the cost of crèches for the children of their employees.

216. Costs. Whenever young children are brought together in groups, there is a greater danger of contagion. Medical supervision is required for both crèches and day-care centres, and this will provide health check-ups and vaccinations. A major cost is staff. If the day-care centre is to be more than custodial, there must be a trained attendant for every 15 - 25 children, and salaries should not be paid on the basis of the number of children cared for. Among other running costs, food is a major item. For neighbourhood centres, the parents and community may participate significantly in their construction, maintenance, and at a later stage recurring costs through fees.95/

217. Example of Burma. Burma provides an example of an attempt to promote day-care centres as part of a large programme of dealing with

---

95/ For operational information about day care see Day-Care Centres: A Handbook, prepared by the Social Welfare Division of the Department of Community Development and Social Services in the Ministry of Co-operatives and Social Services, Kenya (Nairobi, Longman, 1970); A Saliman, Seasat Al-Riayat Al-Igtmai Fi Mujtamat Al Hadisa, (social welfare programmes in newly-settled lands) (Cairo, Egyptian Authority for Land Reclamation and Settlement, 1972), especially chap. 3, on day-care services; Dalil Al Amilin Maa Al-Alfal (handbook for workers with pre-school children) (Cairo, National Council of Child Welfare, 1965). Technical information is given in Care of Children in Day-Care Centres, WHO Public Health Papers No. 24 (Geneva, 1964), and training information in JDC Handbook for Teachers in Day-Care Centres (Geneva, Joint Distribution Committee, 1967) and in Guide Booklet for Nursery School Teachers (New Delhi, National Council of Educational Research and Training, 1969).

UNICEF **MICROFICHE INPUT CONTROL AND INSTRUCTIONS RECORD** No. 819 (1)

(15a) STRIPE COLOUR: White (Blue) Grey - Yellow - Green - Brown - Pink - Red

Date 30 Nov. 1978 (2)

(3) 78.CF.0709

E/ICEF/L.1303 + CORRIGENDUM

THE YOUNG CHILD: APPROACHES TO ACTION IN DEVELOPING COUNTRIES

(16a) Blank

A (17a) ENGLISH

UNICEF

(5)(7)(8) "NR"

27/March 1974 3/3 = pp.109 - 15 "NR" + Corr.(F-5)

50p.

(9)

(11)

B (12) (18a)

B-1	B-2	B-3	B-4	B-5	B-6	B-7	B-8	B-9	B-10	B-11	B-12
CLEAR	3/3 78.CF.1 0709 (4)	CLEAR	1	2	3	4	5	6	7	8	9
C-1	C-2	C-3	C-4	C-5	C-6	C-7	C-8	C-9	C-10	C-11	C-12
C 10	11	12	13	14	15	16	17	18	19	20	21
D-1	D-2	D-3	D-4	D-5	D-6	D-7	D-8	D-9	D-10	D-11	D-12
D 22	23	24	25	26	27	28	29	30	31	32	33
E-1	E-2	E-3	E-4	E-5	E-6	E-7	E-8	E-9	E-10	E-11	E-12
E 34	35	36	37	38	39	40	41	42	43	44	45
F-1	F-2	F-3	F-4	F-5	F-6	F-7	F-8	F-9	F-10	F-11	F-12
F 46	47	48	49	Corr.1 50	51	52	53	54	55	56	57

1 2 3 4 5 6 7 8 9 10 11 12

(19a) ENVELOPE COLOUR: (White) - Blue - Yellow - Pink - Green - Grey

TRAILERS YES ( ) NO (14)

(13) Code "NR", appearing in any location of Row A MUST NOT be reproduced on microfiche


Blank