THE NUTRITION COMPONENTS OF FAMILY HEALTH

Paper prepared by D. N. Nabarro, Erica Wheeler and J. C. Waterlow, Department of Human Nutrition, London School of Hygiene and Tropical Medicine

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Problems of nutrition, as of health care in general, can be approached at different levels - the individual, the family, the community, the nation. The situation for nutrition is particularly difficult, because many of the actions which need to be taken lie outside the health sector. Each level of approach implies a different kind of preventive programme. However, since the individual is part of the family, the family part of the community and the community part of the nation, any rigid separation is artificial, either in diagnosis or in preventive planning.

DIAGNOSIS OF THE NUTRITIONAL PROBLEM AT DIFFERENT LEVELS

The individual

2. It has been traditional to look at malnutrition in terms of groups who are vulnerable on physiological grounds, mainly the pre-school child but also the pregnant or lactating woman. The immediate causes of malnutrition in the young child are so well known that they do not need to be discussed in detail here. Children who are entirely breast-fed may encounter severe shortage of energy by the age of 4-5 months unless supplementary foods are introduced. If the mother's diet is very poor, or if she is unwell, this problem may be encountered at an even earlier age. The supplementary foods available are usually low in energy density, and have to be prepared and fed frequently. This enhances the ever-present danger of contamination and infection.

3. The salient points in the present context are that the first few months of the child's life are critical, and during this period it is totally dependent on the mother or other members of the family. As a consequence, the child's nutritional state, important as it is per se, should also be regarded as an indicator of the state of the family as a whole.

The family

4. The nutritional problems of the family can be looked at from two points of view. First, they seem to be mainly focused on the mother, on whom, as we have seen, the vulnerable weanling is dependent. In most Third World countries the mother is faced with very serious difficulties. The preparation of food can be a very time-consuming business. As Platt showed many years ago in Malawi, many hours may be taken up each day in pounding grain. Water and fuel may have to be collected. The pressure on her time and her health will be even greater if she has to engage in essential agricultural work or industrial employment. All these pressures, which are aspects of poverty, seem to bear most harshly on women. It is not surprising that the United Nations is showing itself particularly concerned with the role of women, and that a special session was devoted to this subject at the WHO/UNICEF Conference on Infant Feeding a year ago.

5. It has been observed, particularly in studies in Latin America, that in a group of families of similar socio-economic status, some produce malnourished children and others do not. As a consequence, stress has been laid on the importance of what is called "maternal technology". In Mexico it has been claimed that the occurrence of malnutrition is related to the mother's education, the extent to which she listens to the radio, etc. It is a logical consequence of this kind of observation that in some preventive programmes a great deal of emphasis should be placed on nutrition education of women.

6. Surely, however, it is unrealistic to suppose that education can be a determining factor in families who are struggling to survive at a level of bare subsistence. Here, as is obvious, the constraints are external to the family rather than internal - not enough land, not enough food, unemployment, etc. In these circumstances education cannot be expected to accomplish much. Moreover, it carries the implication that we know better than the woman how to cope with her problems - an assumption which is unlikely to be true.

The community

7. The second way of looking at the family is as part of a community or group, subject to particular pressures which cause some families or some sections of the community to contain malnourished children. We then need to know the factors which are producing this situation in the community.

8. Diagnosis of the causes of malnutrition at the community level requires that communities or groups of families should be classified in such a way that the common factors which are operating can be identified. It is usual to distinguish between urban and rural poor because it is obvious that their problems are different, but within either group there are further factors which determine whether or not malnutrition occurs - for example, with subsistence cultivators the size of their landholding (Nepal).

9. The procedure is to identify groups of people in the community whose economic status, geographical location, occupation, etc., make them particularly liable to malnutrition, and to direct nutrition planning efforts towards these groups. These have been described as "functional groups", and the process of identifying them as "functional classification". For example, in Costa Rica some functional groups most liable to suffer malnutrition were casual labourers on banana-growing estates and on sugar plantations. This information was obtained by collating and re-analysing nutritional, social and economic data already present in the country.

RESOURCES NEEDED FOR DIAGNOSIS AND PLANNING

10. Consideration of the diagnostic approaches leads on to the question of resources needed both for diagnosis and for planning preventive measures.

Information

11. Many people are disillusioned with nutritional surveys, not without reason. All over the world surveys have been made, at considerable cost, which have little scientific value and which have not been put to practical use. Nevertheless, information is needed as a basis for

planning. For many purposes it is much more practical to use the family rather than the individual as the unit for the collection of information. A good example of the collection of information based on the family unit is provided by the surveys done in recent years in Kenya.

12. The extreme vulnerability of children to becoming clinically malnourished results in the measurement of children's nutritional state being the focus of many studies of community nutrition. However, we suggest that figures defining the point prevalence and severity of clinical malnutrition are not enough to help health and welfare departments to plan their responses to national nutritional problems. It is considerably more useful to them if they know the size and identity of the class of families who are liable to have malnourished members, together with the nature and severity of the stresses they encounter.

13. In many countries detailed information is already available from censuses, surveys and the reports of local government workers, which can help to identify groups. In others a certain amount of survey work may be necessary, particularly to correlate nutritional status with some indices of social and economic status and to explore in depth the characteristics of "malnourished" families.

14. "Family profile" studies, as we call them, focus in detail on the way in which individual families live. Their aim is to show how the social and economic position of the family affects the way in which it responds to stresses, such as illness or shortage of adult time, which can precipitate malnutrition. The profiles will indicate the way in which families mobilise their resources to tackle crises, and the level of resources which may be associated with the development of malnutrition in a family member.

15. The information collected would cover expressed beliefs and attitudes about child health and feeding, with observation of nutrition-related practices; the economic and social resources at the disposal of the family and changes in these resources over time; and the nature of the groups in the community to which the family belongs, and how they interact with one another.

16. Thus, in studies of this kind in Nepal it became apparent that in communities in which opportunities to cultivate new land were limited, the sub-division of a family's land-holding amongst the male children was associated with an increase in the number of farms which were too small to provide enough food to feed the family for a year. There was thus pressure on members of these families to seek alternative sources of income, such as labouring, load carrying or selling firewood. The shortage of local employment opportunities frequently caused one family member - usually the father - to travel outside the community in search of work, leaving the mother with responsibility not only for looking after her children, but also for managing the family farm. This additional task would reduce the time available to her for looking to the needs of her children, especially during the monsoon months when food is in short supply and diarrhoeal disease incidence is highest. Under such circumstances her small children would be liable to become undernourished.

17. These methods for focusing attention on functional groups in the community, including family profile studies, make it possible to characterise malnourished families in terms both of the community groups

from which they are drawn and of the social and temporal processes which tend to increase or decrease their members. The result of this is, first, that target groups for nutritional programmes can be identified. Secondly, programme designers are in a position to consider alternative interventions in the context of the determinants of health and nutrition of family members. This enables them to predict the likelihood that a particular intervention will have its desired impact on family or individual nutritional status. Finally, since the social and economic conditions which give rise to malnutrition are not static, ideally the collection of information, even if it is on a small scale, should be an on-going process,converting surveys into surveillance.

Research

18. When resources are scarce, research may seem a luxury, but there is one kind of research which cannot be so regarded. This is operational research, one function of which is to find out what kind of information is relevant and useful, so that what is useless can be discarded. For example,within this Department there is a difference of opinion about the extent to which the measurement of height in children is essential, useful or pointless. Such questions are quite important, because each extra measurement means more time or more staff.

19. Similarly, there is an urgent need for more information about the actual effectiveness of existing nutritional initiatives in health programmes, so that the constraints to successful operation can be explored and illuminated. This can be done only through sensitive and honest study of programmes that are operating - an activity that, perhaps understandably, appears to have a low priority at present. The consequence is a waste of limited resources and continued suffering from malnutrition.

20. The needs for operational research have been listed by the UN Subcommittee on Nutrition. This is a subject to which outside agencies might well devote more resources.

Manpower

21. The present emphasis on primary health care has concentrated attention on the need for community health workers who provide the essential contact with the family. These workers have to be trained. If we consider only the nutritional problems which they face, their task is formidable, and their training should be such that out of a complex subject the essential elements are selected and put across.

22. This kind of training is particularly difficult and requires trainers who themselves are well-based on both theoretical and practical aspects of the subject. It is a common fallacy to suppose that a short workshop fits anyone to do any job that may be necessary in nutrition, in spite of the fact that this subject is concerned with the most basic of all human requirements. An understanding of the determinants of poor nutrition and the ways it can be improved takes time to be developed. In fact, it is increasingly recognised that one of the major bottlenecks in producing and operating effective nutrition programmes is shortage of trained manpower at a relatively senior level.

23. This subject was discussed in some detail by a special WHO Group in 1976, and again, earlier this year, by the Subcommittee on Nutrition of the UN system. It is, of course, of particular relevance to this Department and this School.

NUTRITION ACTIVITIES IN FAMILY HEALTH PROGRAMMES

24. If malnutrition is at bottom the result of poverty and maldistribution of resources, the logical conclusion is that its solution depends on political and social forces which are outside the control of the health sector. This is a dilemma which we all face and preventive programmes have to be planned within these constraints. Malnutrition must be tackled with a selection of targeted interventions despite the fact that the underlying causes still operate. This will involve all government sectors concerned with development and welfare. Long-term improvement in community and family nutrition can occur only if economic resources are effectively directed to disadvantaged groups. Against this background we have to consider some of the nutritional inputs to the health care system.

25. The traditional approach has been based on the diagnosis discussed in the first section, that malnutrition arises primarily from factors within the family, such as improper feeding practices and lack of knowledge. This has led to programmes targeted to vulnerable groups, defined in physiological terms,based on assumptions which affect the nutrition of the individual. For example, in the 1950s and 60s the view that protein deficiency in young children's diets was a primary cause of malnutrition led to the widespread adoption of programmes in which high protein supplements were provided. Supplementary feeding programmes have a natural appeal, as a direct means of alleviating suffering. Depressingly, a recent analysis by UNICEF shows only slender evidence of any benefit to children,even when they consumed the food on the spot. However, benefit in this context was defined by effects on growth, which may be a crude criterion. There may be subtler benefits which are hard to measure, such as improvements in physical activity and well-being. "Take-home" programmes, in which some of the food is likely to be consumed by the family instead of by the target child may, in terms of our analysis, actually have advantages and are certainly cheaper to operate.

26. There is, of course, a need for individually targeted programmes in which there is a large curative element. Thus oral rehydration saves lives, but it does not eliminate the cause. Injections of vitamin A or of iodised oil are valuable tools for the prevention of xerophthalmia and goitre, but they are essentially short-term measures, the need for which should be eliminated in the long term.

27. The limitations of nutrition education have already been discussed. In many programmes education is combined with other health activities at a clinic. The problem of inadequate coverage because of long distances is a familiar one. The constraints on time are less well recognised and in this context need further emphasis.

28. For example, in countries characterised by a single major period of rainfall each year, mothers are often of enormous importance as economically active family members, and the cost, to the family, of the mother taking time off from her agricultural work may be substantial. This is particularly the case during the rainy season, when childrens' diseases are most prevalent,household food stocks are lower, market prices are highest and indebtedness is considerable. Mothers may face an intolerable burden during these periods and may have to make extremely difficult choices about whether or not they should stay at home and look after ill children.

29. In such situations, to expect regular attendance at a childrens' clinic, an in-patient stay in a therapeutic centre for malnourished children or a positive response to education about oral rehydration may be somewhat ambitious. Given, too, that food shortage often coincides with maximum activity in the fields, it is also not surprising that food supplements meant for the small child may be shared amongst the whole family. Mothers with limited time may also not be in a position to attend nutrition clubs or other community activities as part of a programme to encourage community participation.

30. These comments appear rather pessimistic. They tend to the view that in a nutritional programme targeted approaches, to be effective, should be concentrated on the family in the home environment, and must therefore be carried out by community workers. Experience of such programmes round the world is varied, but there are some containing a nutritional element which have reported a substantial impact on child nutrition and mortality.

31. For example, in Jamkhed, India, a programme started operating in 1971, covering a population of about 85,000. Initially, infant mortality rates ranged from 80 in Jamkhed town to 150 in remote areas. A survey five years later showed that 84 per cent of children under five were immunised and 78 per cent of pregnant women attended for antenatal care. In a comparison area the corresponding figures were 15 per cent and 2 per cent. Infant mortality in the project area was down to 39, while in the non-project area it was 90. The annual cost per head is estimated to be $1.25 - 1.50.

32. Most successful programmes have concentrated on training health workers so that they themselves can analyse the nature of the nutritional problems faced by a family and choose the most appropriate intervention. They are designed with an understanding of the social and economic difficulties in the communities in which they operate, and they have to be flexible, to meet changes in needs as they are perceived by the programme staff.

33. These health programmes do not work in isolation from other sectors of government. Thus, for example, in one programme area, severe food shortage due to harvest failure was countered by the provision of food for work by welfare departments. Information on the distribution of malnutrition, provided by health workers, was used to decide the allocation of food resources.

34. Our analysis suggests that the current fashion for rigidly constructed "modules" of primary health and nutritional care, with short training periods for health workers, an accent on the provision of fixed input packages, with limited opportunity for local flexibility and virtually no local or national integration with other sectors, is not often associated with an effective nutrition component of family health.

35. We think that the characteristics of successful programmes need to be further explored and described in terms of the types of communities and management structures in which they operate. Once these characteristics have been more clearly identified, it will be necessary to see whether they are compatible with existing national health service delivery systems. In many situations incompatibility may be found and this could imply that effective nutrition components cannot be built into health services networks until they are modified.