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Improving nutrition at the local level

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There is no universal recipe for solving the problem of malnutrition in the community, unless major constraints are recognized, and explicit choices are made.

In the first part of this paper, the author puts forward some of the constraints and choices he had to face as a community nutrition worker. In the second part, he discusses some practical aspects of various possible approaches to improve nutrition at the local level, based primarily on his experience in Latin America and the Caribbean.

Two approaches to nutrition at the local level

Nutrition activities at the local level can be approached from two different points of departure: either from the point of view of those who are interested in delivering better services to the community, or from that of those who start with the needs of the community. Both approaches have their merits, each has contributed to improved techniques, and of course, both often lead to the same course of action.

1. *Delivering a better nutrition service at the lowest cost*

As seen from the delivery system point of view the question is: How to deliver better nutrition services to more people at the

Résumé en français « Amélioration de la nutrition au niveau du village », p. 115.

Resumen en español « La mejora de la nutrición a nivel local », p. 123.

lowest cost? What kind of services? And to whom? Since I developed somewhat this subject in a recent book, *Nutrition in the community*[1], this article will only briefly review the matter. Two of the major suggestions of this approach are:

a) the need and advantages of using paramedical personnel (auxiliaries, promoters, etc.),

b) the importance of community participation.

Neither of those aspects, of course, is new, but as seen from the delivery system point of view, both are of paramount importance if nutrition levels are to be improved. [2]

2. *Starting with community needs*

The other manner of looking at local nutrition activities is to start from community needs. What are they and how are they perceived by the people? How to get the people to recognize their nutrition problem, to understand it, to decide upon the course of action to be taken to improve their state of nutrition? How will we make sure that community needs, as they are felt, will be satisfied and that resources provided to the community by the government or a private agency will be effectively used in accordance with government policy?

The whole matter of choice is largely an ethical question: respect for the community, for the will of the people, for their freedom to decide; explicit self-prohibition to manipulate communities or their leaders; capacity to concede points in a discussion. But it also means firmness with regard to broad policy decisions and to sound nutritional and technical considerations. Ideally, either point of departure should lead to one coherent course of action on the part of the government, in full agreement with community aspirations and in close coordination with community organizations, private groups, voluntary agencies, and so on.

Scope of the community approach

This seldom happens, however. As a rule, nutrition programmes such as nutrition education, supplementary feeding, or

1 McLaren, D. S. (ed.), *Nutrition in the community*, John Wiley & Sons, London, 1976.

2 *WHO-UNICEF joint study on alternative approaches to meeting basic health needs of populations in developing countries*, E/ICEF/L. 1322, UNICEF, New York, 1974.

community or school gardens, have failed to improve nutrition to any measurable extent. The causes of such systematic failure have been explained in different ways. In the first place, since malnutrition is so intimately linked to under-development, improvement of nutrition cannot be achieved without concurrent social and economic development. Another explanation is that traditional programmes were too paternalistic, too vertical, and did not take enough into account the recipients of the interventions, i.e. the community itself.

From a different starting point, health and nutrition workers became concerned by the lack of coverage of the health and nutrition services as mentioned before. The magnitude of the task was so large in relation to the amount of resources available, that the conclusion was logically reached that only by mobilizing the one untapped resource, the people themselves, could one expect significant progress. Although in the latter approach the role of the community is seen rather as an additional health resource, still, in terms of practical decision at the local level it ultimately leads to community organization, responsibility, and active participation, to emphasis on auxiliary or paramedical personnel, and to the need to develop technologies for delivering services.

Whatever the rationale behind the community approach, there is a reasonable consensus among nutrition workers that the type, amount, and combination of interventions that are necessary need considerably more exploration and investigation. Assuming that we are interested more in dealing with the causes of malnutrition, than merely alleviating malnutrition in the community, it would be appropriate to review very briefly what those causes are.

Causes of malnutrition

The fundamental cause of malnutrition is to be found in the structure and the operation of society. It is what Béhar [3] has called *the inability of the social system to provide good health and nutrition.* Malnutrition is but one of many expressions of a deep defect in society, associated with poverty, lack of participation,

3 Béhar, M., La responsabilidad del sector salud en la alimentación y la nutrición, *Bol. Ofic. Sanit. Panamer.*, *75*, 1973, pp. 395-405.

ignorance, and other widespread characteristics of under-development.

Low income and under-employment in the cities

In urban areas, in the slums of big cities, the causes of malnutrition are fairly well known. The underlying factors are here basically low income and under-employment associated with poor environmental conditions. Raising income, generating jobs, improving housing and sanitation, and establishing day care centres are some of the key effective interventions. Urban communities may be invited to participate, and in a few cases decide upon such interventions, but the fundamental role usually rests with government for a variety of reasons, among which the mobility of the population is an important one. We will thus rather focus our attention on rural populations.

Access to land, tradition and resistance to change in rural areas

Malnutrition among the rural people is closely linked to economic, social, and cultural factors proper to the community. Low income is not only a cause of malnutrition; it often reflects, as malnutrition does, a much deeper sociological situation: both malnutrition and low income are indicators that something is wrong in the community.

The profound causes of the underprivileged state of rural society vary widely between places: one of the most important among them is the dependency-exploitation relationship that characterizes rural life in so many countries. Access to land, tradition, resistance to change are other factors of variable importance, but the commonest of all causes seems to be the very peculiar type of relationship between the "haves" and the "have nots" combined with the control of the first over the latter to prevent change. Overwhelming evidence suggests that no real and durable improvement in rural nutrition can be expected as long as this relationship persists. We touch here the basic fallacy of so many community development actions and their underlying philosophy. Traditional community nutrition interventions are therefore to a large extent palliative and symptomatic.

There is no technical solution to community nutrition problems, and technicians are at pain to provide guidelines for so-

lutions that are the province of the philosopher, the social thinker, the public-opinion maker, the politician. How the technician can help is the matter of the second part of this paper. Before approaching it, let us review briefly, and critically, the classical community development approach.

The classical community development approach

At the root of the community development concept is the idea that it is up to the people to find solutions to their own problems, with the assistance of government or other agencies, if and when needed. There is a fallacy in this idea, because it mistakenly assumes that, since the problem is in the community, the causes of the problem are also to be found in the community.

What this position systematically overlooks is that essential factors that importantly affect the members of the community are entirely beyond their control. Prices (of produce sold and of commodities to be bought), employment, availability of government services (health, credit, police, agricultural extension, education), level of education, participation in political life, are but a few examples of factors in which local communities have no significant say, often no authority at all, and which are controlled from the outside. Unless such a situation is changed, and that means no less than a change in the power structure of the country, no causal remedy to malnutrition can be expected. In some countries community development has served as a substitute to real change.

Conditions necessary for effective community participation

After acknowledging the existence of the basic fallacy of community development, how should we approach community nutrition ? Under which conditions is community participation possible ?

Community participation, a goal in itself

I have adopted the thesis that community participation should be a goal in itself, and more than participation, community

awareness, organization, decision, and action. If many communities are conscious, organized, and decide to attack their problems, then the dependency that affects the root of the nutrition problem has greater chances of being broken.

Government commitment

That nutrition improvement under such conditions is not only possible, but real, is illustrated by the case of Panama. There, people of the community were invited by the government to make their own nutritional survey, to interpret their findings, to propose solutions such as a community garden, the building of a health post water supply, etc., and to implement their decision—for which the Ministry of Health would provide partial support.

Progress was slow and uneven. Some communities did not respond at all to the stimulation. But nutrition awareness was generated in a population many times larger than the few communities directly approached by the Ministry of Health. Fatalism was broken, and community action in a number of villages later attacked other problems such as marketing or education. A government committed to change, even if political circumstances restrict it to a moderate pace of change, is essential.

Relative unimportance of the nature of the programme

Experience seems to show, conclusively at least as far as the author is concerned, that the type and nature of the intervention which the community initially selects is not very important. It has been repeatedly observed, in cases where a community garden, or a health post, or a water supply system are the initial actions undertaken, that as the community's awareness and interest grow, it progressively turns to other associated interventions and eventually reaches a comprehensive package. The role of the technician here is quite clear: to inform, to provide alternatives, to underline the synergetic effects and complementarity of possible interventions.

Technical aspects of nutrition programmes

Whether one accepts or not that the order of interventions is not a key factor, still, even in the countries most committed to

community improvement, a number of technical considerations must be taken into account.

The suggestions made below are a few illustrations of what can be done. They certainly do not pretend to list everything that is desirable, nor to apply to all places and situations. I shall write more on the health aspects, since I am more familiar with them.

Health-related nutrition activities at the local level

Health-related measures to improve nutrition are basically palliative and to a large extent symptomatic, but not therefore to be discarded. The malnourished individual, particularly the malnourished child, is a sick, a dangerously ill individual, who has a right to immediate, competent, and sustained care. One of the very first local nutrition activities, therefore, will be to ensure the prompt and adequate treatment of all malnourished children. This implies adequate diagnosis and early detection of cases. Let us review briefly, approximately by decreasing order of priority and increasing order of complexity, what can most generally be done.

Treatment of malnutrition

The great majority of malnourished children can and should be treated in their homes. Home visits and nutrition education in the home are key ingredients (and of course, they do require manpower to do the job, hence the importance of community nutrition workers: auxiliary nurses, promoters, health guardians, etc.). If a good food supplement is available, it will accelerate recuperation and also stimulate the participation of the mother. It is essential that the food supplement be given to the whole family, not only to the sick child.

The nutritional rehabilitation centre (NRC), if operated correctly, will provide quick recuperation and intensive education of the mother, while at the same time removing the load from the hospital. It only is justified, however, in fairly sizable communities, and where the prevalence of malnutrition is high.

The use of the hospital will be reserved strictly to very severe and complicated cases of malnutrition, and the stay will be as

short as possible, particularly if there is a nutrition rehabilitation centre nearby to accept recuperating children discharged from the hospital ward. [4]

Two points still deserve to be emphasized:

1) Treatment of malnutrition is not a proper term: *management* is more adequate. Besides the dietary and medical care that the child requires, he or she also needs affection, warmth, physical exercise and psychological stimulation, and the re-establishing, in many instances, of a normal mother-child relationship.

2) A reference system between community, health post, NRC, and hospital needs to be established or strengthened. Many relapses and too many deaths can be ascribed to a lack of formal communication and effective reference system of patients. In this aspect, as well as in the previous one, there is ample margin for community action.

Management and prevention of other diseases

Nutrition treatment can never be isolated. Most malnourished patients also suffer from associated diseases, among which diarrhoea, respiratory and urinary infections, and otitis media are the most common, and must be taken care of at once. The level of medical care provided will vary widely according to the size of the community, the proximity to good health services, the health resources of the country, and the degree of social organization at both community and country level. *Generally speaking, over 90 % of diseases and wounds can be treated successfully at the community level by auxiliary health workers*—provided three conditions are met: they were previously adequately trained; they are well supervised; and there is a reference mechanism by which

4 A discussion of those points can be found in the following references:
- treatment in general: Beghin, I., Centers for combating childhood malnutrition, in: McLaren, ed., *Nutrition in the community*, John Wiley & Sons, London, 1976, Chapter 15, pp. 169-183.
- nutritional rehabilitation centres: Beghin, I. and Viteri, F., Nutritional rehabilitation centers: an evaluation of their performance, *J. Trop. Pediat. Envir. Child Hlth*, no. 19, 1973, p. 403.
- supplementary feeding: Beghin, I., Centers for combating childhood malnutrition, *op. cit.* Beghin, I., Baez, M., Lucena, M. A., Costa, T., Bazante, M. and Batista, M., The integration of nutrition into the health services of Northeast Brazil: supervised supplementary feeding, *Ecology Food Nutr.*, no. 1, 1972, p. 295.

severe or complicated cases can be forwarded to better-equipped and -staffed facilities.

Early detection and diagnosis of malnutrition

So far we have been speaking mainly of the individual patient. However, if the target is to treat essentially all malnourished children, then a device must be established that identifies them promptly.

Diagnosis of malnutrition by lay personnel can easily be done through the use of weight and height. A combination of weight for age and weight for height gives, for all practical purposes, a sufficient degree of accuracy to identify malnourished children.[5] Depending on the personnel's degree of training, clinical signs and dietary data may be taken into account to refine the diagnosis. Still, the real problem is how to pick those children that do not go spontaneously to the baby clinic or the health post.

A variety of means have been used, such as systematic periodical home visits to all families in Cali, Colombia; "weight census", i.e. periodic weight taking either in the home or at gathering points, identifying of contacts, etc. There is a key role for the community in checking periodically the nutritional state of its most exposed members. Surveillance of pregnant women should be added. And this brings us to another local activity: nutritional surveillance.

Nutritional surveillance

Epidemiological surveillance of the nutritional state of the community is not a traditional local activity. We do not even know if it is possible to perform it on a sustained basis, with practically only local resources to count on. Still, the continuous collection of a very small number of key indicators (infant deaths; weight and height; birth weight if possible; basic food prices; rainfall; major crops, etc.) could be of great assistance to the community and to the authorities:

- to the community, because it would help it detect early cases, monitor its own situation, maintain awareness, guide action,

5 Baez, M., Beghin, I. and Aranda-Pastor, J., Supervisión de programas de nutrición, *Arch. Latinoamer. Nutr.*, *25*, no. 3, 1975, pp. 251-258.

affect collaboration with and demand on the health system;

- to the government, because the aggregate information from many communities would provide it with a film of the evolution of nutrition in the country, to be checked against other indicators collected through the various statistical information systems from the health sector, agriculture, economy, etc.

I am not sure to what extent communities can be counted upon to maintain a continuous surveillance for any significant period of time. Experience by the Ministry of Health of Panama, however, has repeatedly shown that duly motivated and guided rural communities can and indeed do survey their own health and nutrition state, interpret their findings, and in a surprisingly adequate manner identify the causes of their ills.

General preventive measures

Nutrition cannot be separated from health, and any nutrition programme will possess a very heavy health component. Pure nutrition is out, hopefully forever. Environmental sanitation and particularly the supply of potable water to the home, latrines, health education, immunizations, are among the health activities that bear upon improved nutrition, and are opportunities for organized community action. Again, Panama is a good example of a country where those activities are being done by the people, with help from the Ministry of Health. In Honduras an important component of the national nutrition plan is to provide water to small communities.

Family planning and immunizations are, in my opinion, inseparable companions of nutrition activities. I do not believe that one can reasonably and honestly approach nutrition divorced from family health, nor consider family health without all its components: nutrition, pre-natal care, immunization, family planning, sanitation, health education, motivation for community action, women's participation, etc. The well-being of the family is dependent upon each of these factors, and to eliminate any one of them on the ground of ideology, religion, or obsolete public health concepts is unacceptable. None of them on the other hand, except prevention of a few diseases that represent a danger to third persons, should ever be imposed upon anybody.

Increasing food production

Increasing food production to alleviate community malnutrition is a logical idea, and it has been a major component of most community nutrition programmes since these were promoted by UN agencies. The Applied Nutrition Programmes strongly emphasized by FAO, WHO and UNICEF in the late 50's and the 60's always had a strong production component: school gardens, community gardens, 4H or 4C or 5D clubs for the youth, poultry raising, other small animal raising, etc. Voluntary agencies such as CARE or the Heffer project for animals pursued the same philosophy.

There is little doubt that this approach has been useful as an educational device (education was an explicit goal of all those programmes) and as motivation for governments. Still the role of local food production programmes in improving nutrition is open to doubt. Conclusive positive effects were demonstrated in only very few situations. The programmes have been plagued by poor coordination; by a choice of cultivation, such as horticulture, often irrelevant to the major nutritional needs; and by poor design with little or no in-built evaluation.

This should not be interpreted as a rejection of the approach on my part. But agricultural extension, teaching of techniques, organizing rural youth, motivation, etc. are one thing. Improving nutrition, experience has shown us, is another. *Increasing food production as a community action, while a good thing per se, does not necessarily, and usually does not affect measurably the nutritional state of children in the village.* Significant increases in food production, with an impact on nutrition, imply much more than localized community programmes: access to land; credit; good, competent, and continuous technical assistance; marketing; and other conditions which are generally met only after important organizational and structural changes have been made in the country or the region.

Raising income

Increasing food production, developing crafts, small industries, cottage industries, etc. all have been tried. As in the former

case, generating employment and raising incomes is a difficult task, and when it succeeds, it is usually because of a strong and sustained will of the government to break or amend structures that maintain low wages and under-employment. Before setting ambitious goals in terms of raising incomes, community workers should be careful to weigh the realism of their target, and match it against their own input.

Education

Education is essential for improved nutrition. But again what kind of education? What for? Nutrition education pe, se usually does not pay off the time spent on it, unless it is designed to back and support some other activity that the people feel is needed and actually want. How to conduct effective nutrition education, i.e. a type of education that would modify behavior, is still an open question. Traditional methods such as talks to groups of mothers, posters, pamphlets, etc. are useless if they are not a part of an activity that people understand and care for. And even then, their effectiveness in relation to their cost is open to serious questioning.

More modern methods such as radio, TV, cassettes, etc. are promising, but need considerably more research. The danger with them is the importance given to the hardware and the gadgets, and the risk of losing track of the objective, which is to change attitudes. In that sense, community awareness, motivation, and participation, through the dialogue between health workers and the people over series of meetings, then followed by action, *is* nutrition education. Panama, again, is the best example I know of.

Community action as primary goal

Any one of those approaches—and actually many more—are valid as a starting point, provided community organization and action is the goal, *and* the overall social context is committed to change. It must be said, in truth, that in a number of countries, such as in Latin America, governments try to weaken the dependency-exploitation situation, but they often do so against tremen-

dous resistance and with little margin to maneuver. Those obviously are the countries where community nutrition efforts do make sense.

Difficulties in implementing a coordinated approach

The so-called "coordinated" or "integrated" approach to malnutrition at the local level is both logical and attractive. Since malnutrition is due to multiple causes, and since combating it means involving multiple sectors, the need for a combined and coordinated action in health, agriculture, and education seems obvious.

This was the rationale behind the famous APN (Applied Nutrition Programmes) and similar schemes. It did not work, as we saw, partly because of ideological mistakes and/or technical errors, but basically because coordination was shown to be close to impossible.

Conceptual errors were:

1) to consider, at least in practice, community participation as an added resource, not as a goal in itself;
2) to design activities based on assumptions and not on a real epidemiological study of malnutrition;
3) to set nutrition goals utterly out of range of the measures proposed to reach them.

The coordination was satisfactory in only a few cases, and then never for any long period of time. It either would collapse, or one of the sectors would take over the leadership from the others.

A one-agency approach: a hypothesis

I would like to venture the hypothesis that maybe one should stop wasting considerable manpower time on coordination at the local level, and adopt instead a one-agency approach; whether this will be the Ministry of Health (as in Panama), the National Institute of Family Welfare (as in Colombia), or the Agricultural Sector (as in Rio Grande do Norte, Brazil), will depend on local circumstances. I was very skeptical indeed when I first saw

nurses from the Ministry of Health of Panama plowing a common field with a small tractor, or when watching agricultural staff promoting health near Natal, Brazil. Still, it does work. The people do not categorize their problems as we do. To them, the division of responsibilities between sectors or ministries does not reflect their local needs. This separation at the local level is irrelevant. My proposal, then—and it needs further testing—is that, while ministries should be left separate in their technical functions, and also in the delivery of specialized services, basic community action should be handled by only one agency.

Strong community development agencies do exist (such as FOCCO in El Salvador). Still, they often operate parallel to the other government services, with usually uneasy or unclear relationships at the local level. Further research is necessary indeed.

Need for more and better supervision

Past over-emphasis on coordination (over-emphasis in relation to potential results) is matched by under-emphasis on supervision. As a rule, community workers of all sectors are inadequately supervised, and supervisors have not been sufficiently trained in supervision. [6] To my suggestion of giving a fairer chance to the one-agency approach, I would like to add a strong point in favour of more and better supervision. With better supervision, each participant playing his own role, the need for coordination may well subside.

Lessons from socialist Third World countries

The experiences of Third World socialist countries, especially that of the "barefoot doctor", are *in*, and a faddism developed towards Asian health systems. Such an exaggeration actually is counterproductive, since it generates a reaction that limits the extraordinary importance of the Chinese and other models for health in the developing world.

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6 *Delivery of primary care by medical auxiliaries: techniques of use and analysis of benefits achieved in some rural villages in Guatemala*, Scientific Publication no. 278, PAHO, Washington, D.C., 1973.

Two very important points must be made here:

1) The health delivery approaches developed in China or North Vietnam were developed in a context diametrically opposite to the one briefly described in my first section. There governments are committed to improving social conditions, the exploitation-dependency relationship has been broken, and community participation and responsibility is part of the dominant social philisophy.

2) In those countries, as well as in Cuba, people in charge of health do indeed meet a number of problems, particularly with regard to delivery of health, and do face contradictions between the demands of the population and the roles of the local auxiliary, or barefoot doctor, on the one hand, and more sophisticated medicine on the other.

The point is that we should attempt to learn considerably more from those countries, but also take the lesson critically, and understand that the kind of political and social structures prevailing in many developing countries severely restricts the possibilities of adopting or adapting this lesson.

The role of private and voluntary agencies

Private groups, churches, voluntary agencies and foreign governments often operate localized nutrition programmes which are little or not integrated into the host government services. Inasmuch as the programmes are sound, well staffed, and do have continuity, their significance can extend well beyond helping a small community. Their human and philosophical meaning is easy to grasp. Their technological contribution, however, is not always valued sufficiently. The examples of Behrhorst in Guatemala, [7] the POSHAK project in India, the work of the Berggrens in Haiti, are good cases in point. I believe that one can, without contradiction, admire, support, and contribute to voluntary agency efforts, and at the same time recognize that in many countries their impact on the country as a whole is not significant.

Therefore, besides bringing warmth, generosity and compassion, their role could be to open new roads, test new delivery

7 Behrhorst, C., The Chimaltenango development project in Guatemala, in: Newell, K. W. (ed), *Health by the people*, WHO, Geneva, 1975.

technologies, demonstrate how more human approaches can and indeed should be taken. Governments and UN agencies should learn more from them and help them: a permanent dialogue seems desirable on how to approach community nutrition, health, and well-being.

Conclusion

The main points that I have tried to convey are the following:

- There is no technical solution to the problem of malnutrition.
- The traditional community participation approach rests on a basic fallacy, which must be understood and continuously kept in mind, when working with village people.
- Much can be done, if the two earlier points are accepted and kept in mind.
- A variety of approaches, each as valid as any one of the others, may be adopted if the goal is, as it should be, community conscience, organization, decision, and action.
- Coordination between agencies at the local level is generally close to impossible, and a *one-agency approach* should be tried on a more extended basis than presently done.
- More should be known about and tried from the experience of Third World socialist countries.
- A systematic review of the experiences of voluntary agencies and private groups, in addition to those of government and international agencies, is needed and should be undertaken in the light of the statements made above.

Readers will undoubtedly detect contradictions and inconsistencies in the ideas presented here. I am aware of a few—which so far I feel unable to resolve—and unaware of probably many more. I thank in advance those who will open the dialogue on so many controversial issues.