

NATIONAL NUTRITIONAL PLANNING

D. MORLEY, M.D., M.R.C.P., Reader in Tropical
Institute of Child Health, U. of London Child Health

The 'fifties and 'sixties 'were decades in which developing countries became involved in the construction of large teaching hospitals. These institutions have tragically misdirected medical effort, and in tackling national nutrition problems have been particularly ineffective . In this and the next decade the villager must himself become involved if the nutrition problems of the developing world are to be overcome. This paper suggests why the large teaching hospital is unsuited to tackle the nutritional problems of developing countries, and offers an alternative approach.

Needs of Developing Countries:

The developing countries have around £ 1 to spend on health care per person per year, and by the end of this present century are likely to have around £ 3. Throughout this period the per capita expenditure on health in a developing country will remain around 1% of that spent in Europe and North America.(1) Most developing countries have chosen to spend between 20% and 50% of their yearly health budget on one or more teaching hospitals. These may answer a felt need of the elite of the country, but are inappropriate to the needs of the rural workers who make up the majority of their population. Recently I visited one of these institutions, where I found police on guard at the front door to prevent patients entering that way. The front door was used only by doctors and nurses; the patients used a back door on the floor below. This experience was a strong confirmation of the view that these institutions were a strong confirmation of the view that these institutions are constructed for doctors, nurses and admission rather than for the patients whom they should serve. They were intended as a source to supply doctors for the urban and rural areas of the country; these doctors are now being turned out by some in large numbers, and on qualification are presented with three alternatives, each of which may be frustrating and lead to unhappiness. Some strive after a higher qualification, but not in nutrition. With a specialist qualification they return to staff the teaching hospital or set up in private practice. Some try to serve their country in the rural areas, but are frustrated because their training has failed to prepare them to become leaders of a district health team, by the lack of resources, and by the absence of amenities that their city upbringing taught them to expect. Some join the braindrain to live and practise in a foreign

* Based on lecture given at B.M.A. Clinical Meeting, Jamaica, April 1974.

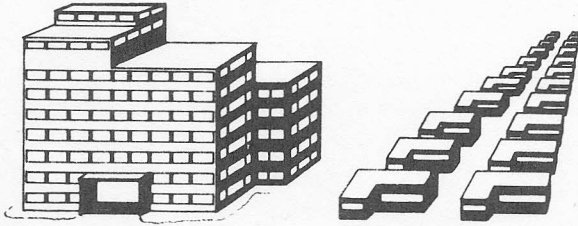


FIG. 1—Which option—a vast teaching hospital for doctors or health centres for the community?

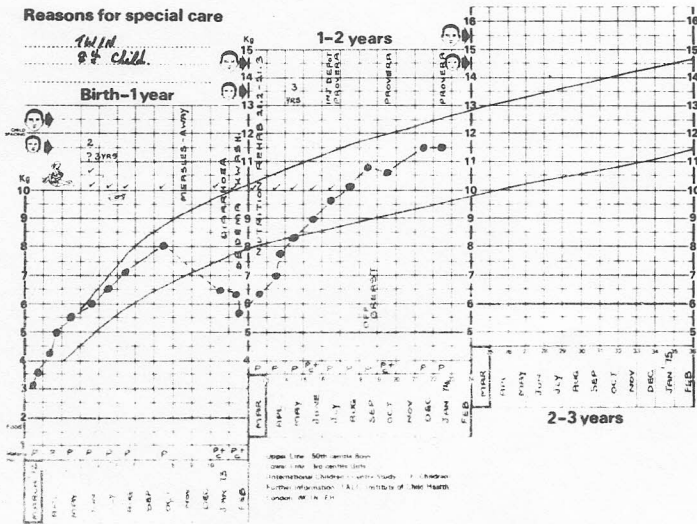


FIG. 2—A sample weight chart, a type widely used in under 5s clinics. Much time has been taken to simplify the layout of the growth record and yet it contains much information.

successful. The methods appropriate to a health centre will be first considered, followed by some suggestions for a village part-time health workers.

Monitoring Growth:

The health centre with its subcentres may have a population of 10,000-100000 to care for. Of these, children under the age of 5 will be most in need and probably represent almost 20% of the population in a developing country. The Paediatrician's approach to overcoming malnutrition rests on the promise that children showing adequate growth are secure against malnutrition. Some measurement will be required to monitor growth, such as the simple weight-for-age chart developed in the sixties. (3) Even the simplest of charts involves new skills and a symbolism previously unknown to the average worker in the health centre. Nevertheless their introduction for half the under-5 population in Zambia, Malawi, and Sarawak(3) is evidence that these charts can be maintained even in predominantly rural populations. Every effort has been made to keep them simple, and where possible to simplify them further (Fig. 2).

Uses of the Chart:

The weight curve remains the best and most sensitive measure of growth in the young child and is integral to the comprehensive care provided through under 5s' clinics. Height or length measurements are unquestionably valuable to the average rural clinic, and I have yet to visit one where decisions on a child's management were taken on the basis of changes in the pattern of his growth in height. With the weight chart the health worker can monitor whether a child's weight gain is unsatisfactory and the mother may need help and advice on the management of her child. Also, against the weight curve significant illnesses are recorded, so that the health worker can obtain an immediate picture of the child's health. So long as the children under his care are gaining weight properly the auxiliary knows they are free from danger of malnutrition, and with those who fail to gain weight he may have the satisfaction of seeing growth resume after help given to the mother.

In most children malnutrition is precipitated by an acute infection against which modern vaccines are effective measures in terms of cost-benefit. Nevertheless, their economic use needs regulation by a record system. Wherever the mother goes for health care any inoculations needed should be given and recorded on the chart which she keeps. .

"At-risk" children, whether for social or other reasons, can be identified, and as this is recorded prominently on their charts, so extra attention can be given to them.

Birth Interval:

Up to the present the paediatrician and child health services have played only a small part in motivating mothers towards family planning. Nevertheless, there is evidence that mortality, morbidity, growth, and intellectual ability are favourably influenced by an adequate birth interval. The growth chart can be used as an instrument for maintaining the birth interval. The “vulnerable month” has been suggested as a name for that month in which 5% of mothers will conceive again after the birth of the last child. This can be discovered by subtracting nine months from the birth interval of 4% of mothers with the shortest birth interval in the community. Armed with this information, the auxiliary can discuss family planning techniques some months before the vulnerable month with the mother, so that she can take the appropriate steps if she wants a longer birth interval. Along the top of the chart a simple record of the dialogue between the mother and health worker can be maintained.

Part-Time Health Workers:

Experience in several countries suggests that none of the present cadres of health workers are sufficiently in touch with the people they serve. The least well trained member of the health team will have had six to seven years' formal education, with two to three years specialized training. Girls who have received this length of training are likely to have problems in communicating with mothers who may be older than they are, but 80% of whom are illiterate. Health workers are needed who are more in touch with the people. They are found in the “barefoot doctor” of China(4), the health promoter in Guatemala, (5) the village first aid workers of Tanzania, or the social worker in India.(6) These workers have several important features in common.

- (a) they have already established themselves as farmers, or with other skills that are acceptable in the community, and they continue to practise these, working only part time in the health field.
- (b) Their training is part time, in some areas one day a week, or alternatively in a season when there are few farming or other activities. This training is done with as little dislocation as possible from their family and community life, and does not involve a stay in a large city.
- (c) They are not on any central payroll, but are recompensed by the community.
- (d) They are selected by the community, which is encouraged to choose people whom it recognizes as being concerned to help the community rather than having any ambition to receive training for personal gain or so that they may work in towns. They remain in touch with the desires and needs of the community and sympathize and understand the local understanding of the approach

to illness. They do not become one of "us," the health professionals, but remain one of "them", the people.

Such workers may function in several ways. At first they are unlikely to have the Expertise to weigh and chart the well nourished children in the community. Nevertheless they can identify the less nourished children by other ways. For example, a coloured strip can be placed round the midarm of children between the ages of 1 and 5 years, and the nutritional state of the child accurately assessed from the circumference.(7)

Another variety of this type of worker may be trained in what has been called schools for parents. These exist in the Congo; the parents pay, so that on one day a month they can come with their child, who is weighed, immunized, and receives any other treatment necessary; at the same time both parents undertake a course of study for the day. Another field in which this level of worker can function is in the preparation of weaning foods. A good example of a successfully locally produced food is the Hyderabad Mix, whose ingredients are locally available. They are cooked dry by roasting, ground up, and packaged for sale in the local market. Each packet may contain half the child's protein and a quarter of his calorie requirements in a concentrated form.

Nutrition and Politics:

Of all the medical disciplines the paediatrician is the first to find practice within institutional walls unsatisfactory. Most conditions that overfill his children's wards are preventable, or can be treated in health centres. Once the children's doctor moves out into the health centre and beyond that into the child's home, he will be uncomfortably faced with sociopolitical problems. Seated with the mother and her sick children in the village but he can no longer withstand the realization that for this sick child the need is not medical, but a society and a nation that are concerned with its underprivileged. One unfortunate result of this realization may be that the doctor, by tradition aloof from politics, withdraws into his large hospital. The alternative is to place pressure on the political institutions and present the evidence of what malnutrition is doing to retard national development.

If nutrition is dependent on national politics it is also of much concern to medical politics. The village worker suggested above is still unacceptable to many doctors and their professional organizations. In rural Punjab research has shown that three-quarters of the health care is provided through local people who have learnt to give injections and practise traditional medicine in response to the people's need. A proposal by the Indian Government to recognize and provide training for these people in such subjects as nutrition was defeated by the medical lobby. Other countries have medical professions

no more liberal than India. Effective services in rural areas continue to be blocked by city-based doctors and nurses striving after and passing laws to maintain and improve training of personnel and standards of health care for the elite who live in their cities – standards of care and qualifications which are out of the reach of the rural people both now and in the foreseeable future.

REFERENCES

- (1) Bryant, J.H., *Health and the Developing World*. Ithaca, N.Y., Cornell University Press, 1969.
- (2) Cook, R.J., *Journal of Tropical Paediatrics and Environmental Child Health*, 1971, 17,15.
- (3) Morley, D. *Transactions of the Royal Society of Tropical Medicine and Hygiene*, 1973, 67, 155.
- (4) Chi Wen, *Lancet*, 1974, 1, 976.
- (5) Behrohorst, C. *Personal Communication*, 1974.
- (6) Shah, P. *Personal Communication*, 1973.
- (6) Shah, P. *Personal communication*, 1973.
- (7) Shakir, A., and Morley, D., *Lancet*, 1974, 1, 758.
- (8) Morley, D., *Paediatric Priorities in the Developing World*. London, Butterworths, 1973.