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USING NUTRITIONAL SURVEILLANCE: MORE WILL TO ACT, OR BETTER INFORMATION AND POLICY ANALYSIS?

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Procedures for monitoring nutritional status are becoming well established in many countries in Asia, often associated with nutrition intervention programmes. Here are a few examples, many of which are described in other papers to be presented here (ref. 1). The National Nutrition Monitoring Bureau in India has been publishing state-level statistics from sample surveys on food consumption and child nutrition annually, starting in 1972. In Indonesia, the UPGK includes a child weighing programme collecting monthly weights of pre-school children in 20,000 villages, and summary statistics are regularly reported through the Ministry of Health; food expenditure data are available through SUSENAS. Several data sources are available in the Philippines - sample surveys from FNRI, a national child weighing programme, and recently a school-entrants survey. In Sri Lanka, repeated sample surveys of pre-school child anthropometry, and further surveys of all districts have recently been completed. In Thailand, the Ministry of Health regularly reports prevalences of malnutrition in children attending clinics throughout the country.

These data are used, at local and central levels, for management of nutrition programmes. However, prevention of malnutrition requires actions beyond nutrition programmes - in health and in economic development - and this need is recognized in general policy statements in many countries, for example in national development plans. As yet, however, few decisions have followed on policies or programmes beyond initiating specific (and, compared with other activities, often relatively small-scale) nutrition interventions such as supplementary feeding or nutrition education. A substantial data base that could be used for policy and programme analysis and subsequently providing guidance on these now exists, but this data base could be much more effectively used.

This paper examines why more effective use of available data is not made - what are the blocks to formulating more effective policies to tackle malnutrition? Identifying, understanding, and removing these blocks should be an important area for research. In the context of nutritional surveillance - which means "watching over nutrition in order to make decisions leading to improvements in nutrition in populations" - it is arguably the most important research area at present.

The conventional algorithm for generating action to tackle a problem of public concern tends to be linear: data collection, analysis, designing intervention, implementing intervention. This can work well when the necessary action is within the control of those concerned about the problem. Smallpox eradication by the health sector is an example. For nutrition, much of the required action is outside the control of those primarily concerned with the problem. Decisions are needed in economics, agriculture, food policy, health, and so on; moreover these decisions will more often modify existing actions than initiate new ones. A different algorithm is needed, whereby **potential** decisions are identified early on, and the information and analysis feeds into better definition of possible action and the associated trade-offs, hence further defining information needs, and so on. This is illustrated in figure 1. If we accept that an iterative process is more suitable, this means that the starting point is **not** data collection, nor even analysis, but identifying what decisions could be made on what issues, then moving to gain the necessary information.

Nutritionists commonly complain that the reason that malnutrition persists is that political will is lacking to take the necessary action. Those whose will is called into question respond that nutritionists fail to come up with feasible, well-substantiated recommendations for intervention. Both have a point. Some of the problem is due to misunderstanding. For example, there remains an unjustified belief that low cost, easily-managed interventions can take care of PEM - usually based on outdated ideas that protein inadequacy is the primary cause, and is susceptible to delivery of preventive or curative measures (e.g. protein supplements); and nutritionists may (often unwittingly) collaborate in fostering this illusion. On the other side, nutritionists, realizing the deep-seated social and economic deprivation is the root cause of malnutrition, may advocate impossibly extensive commitments to organization and reform. In reality, nutritionists are only now beginning to estimate costs and

effectiveness of interventions in their own area, and there is as yet insufficient information to generalize. The policy-makers can often rightly claim that only vague and inadequately substantiated guidance is available on how to use resources to improve nutrition if these resources were to be committed. A major priority should be to remedy this situation.

The constraints could be both in coming up with sensible recommendations for policy, and in taking action on these. It seems useful to catagorize these constraints, for example as shown in figure 2. Here, it is proposed that taking action on a particular issue relevant to nutrition in order to prevent malnutrition requires (a) that 'what to do' is spelled out (recommendations made); and (b) that these recommendations are put into effect. On any particular issue, the constraint may be that potentially feasible recommendations have not yet been made - the right hand column of figure 2. On the other hand, it could be that even if potentially feasible recommendations were made nothing would actually happen - the lower row in figure 2. Let us define what we mean by issues relevant to nutrition. They could concern allocation of programme resources, in health, or for nutrition interventions themselves, to areas of high malnutrition prevalence; they could concern switching a subsidy from one staple food to another; or directing investment to the small farmer; or promoting one cropping system rather than another; or including a clean water component in a development project; and there are many others which could be defined.

Although there are many decisions affecting nutrition in many sectors, two types of decisions are almost universally important: deciding to whom to direct resources - which usually means explicit or implicit targetting of goods and services to certain population groups; and how to use these resources to better affect nutrition. Examples will be given later.

We do not yet have sufficient experience to put numbers in the cells of figure 2 - to say on a series of issues where the main blocks to action lie. When guidance on policy is available, getting the necessary action involves building institutional links, improving organization, and advocacy. On the other side, given the rather wide availability of data at present, it may be that suitable analysis of these data, and analysis of policy and programme options on

this basis, are the constraints in moving from right to left in figure 2. Although we cannot yet say which of these is the more common constraint, there is still progress to be made in the area with which nutritionists can deal - in information and analysis, to generate relevant recommendations on policy. Experience in other related fields - for example in population policy, infant feeding, and public health (e.g. diarrheal disease) - tends to give some hope that as questions become better understood, so the will to act on them increases: one can move perhaps diagonally from bottom right to top left in figure 2. For this, carefully planned research and suitable presentation of results have an important role to play. Although experience is limited, two examples can illustrate this, related to decisions on targetting and programme design.

One country in Latin America - Costa Rica - in the late 1970's set up a large-scale social welfare programme, called the Asignaciones Familiares; within this, a nutritional information system was established. One of the data outputs is given in table 1. Here, cantons (there are 80 such administrative areas in the country) are ranked by prevalence of stunting taken from a school survey. Other indicators, derived from census results, are given essentially to lend weight to the anthropometric data. The higher the figure, the worse-off for all indicators. Only the extremes - the ten worst - and ten least-affected cantons are shown. The anthropometric data provide policy makers with a useful integrative indicator, with clear health implications. These data are of particular interest because they led to a Presidential decree declaring eleven cantons with the highest malnutrition prevalence as highest priority for social welfare programs.

A second illustration of using nutritional data to help guide resource allocation is from a baseline survey (now being followed by monitoring of nutrition) used for planning an area development project in the Philippines, (Table 2). The survey results show that both water supply and toilet facilities appear to have an effect on the prevalence of malnutrition, from the marginal totals. But comparing the figures in the cells within the table it is clear that the effect of water supply appears to be greater than that of improved toilet facilities; moreover, only a relatively small proportion of the population has an

unimproved water supply. Based on these and other data, the possibility of a focussed and effective intervention on water supply was therefore put forward to the project planners. Such an intervention is now being implemented, moreover targetted to areas in need nutritionally.

These two examples are presented to illustrate that quite straightforward data presentations, to the right audience, at the right time, and in the right context, can be effective in planning.

The usefulness of nutritional data can be tested before embarking on major commitments to data collection and analysis. We have proposed an initial assessment procedure (ref. 2), and participated in testing this in a few cases. We suggest that potential users and uses of data should be identified at an early stage. Preliminary results can be put on the table, by compiling and reanalyzing existing data. The policies and programmes affecting nutrition that are susceptible to modification (e.g. retargetting, modifying design, adding components) must be tentatively identified, with the possible decisions on modifications. This can lead to defining better the needs for further analysis. In effect, this helps to decide where in figure 2 different issues lie - could recommendations be made and adopted, and which are the most promising issues to tackle?

This process of influencing planning takes a long time, and the process may involve advocacy, seeking concensus, assessing trade-offs, and so on. Decisions <u>are</u> made, and resources <u>are</u> allocated - witness the extensive nutrition programmes in this region, such as the Integrated Child Development Services in India, the UPGK in Indonesia, and the Philippine Nutrition Programme, to name but three. There is now compelling evidence that economic measures as much as those in the health sector are needed to bring about long-term prevention of malnutrition. Institutional organization is required to insert nutrition concerns and objectives into the decision-making in economic development, and in food policy and agriculture. Nutritional information can contribute - if it is geared to generating feasible options and providing a scientifically sound basis for deciding on issues. A sustained effort will be need to shift such policies - but a start is being made and we should foster this development. For this, we need to understand not only nutritional

problems, how they are changing, and their causes, but also the processes of formulating actions to deal with them.

References

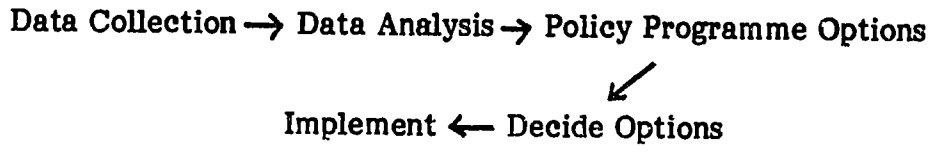
1. Background papers for Post-Congress Workshop on Nutritional Surveillance in Asian Countries, Bangkok, 7-9 November 1983. UNICEF Regional Office, Bangkok/Cornell Nutritional Surveillance Program.

2. Mason, J.B., Habicht, J-P, Tabatabai, H., Valverde, V., Nutritional Surveillance, World Health Organization: Geneva (1983, forthcoming), Ch. 2, "Initial Assessment".

FIGURE 1

Procedures for Generating Action

A. LINEAR



B. ITERATIVE

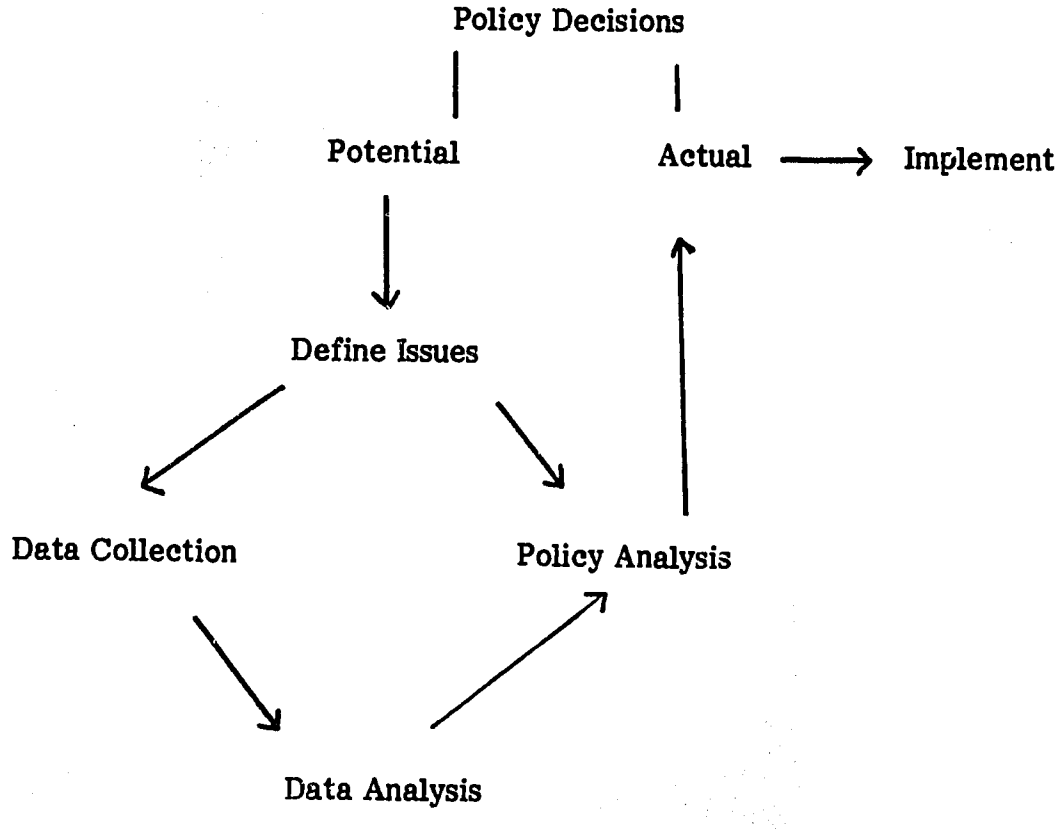


FIGURE 2

Constraints to Action

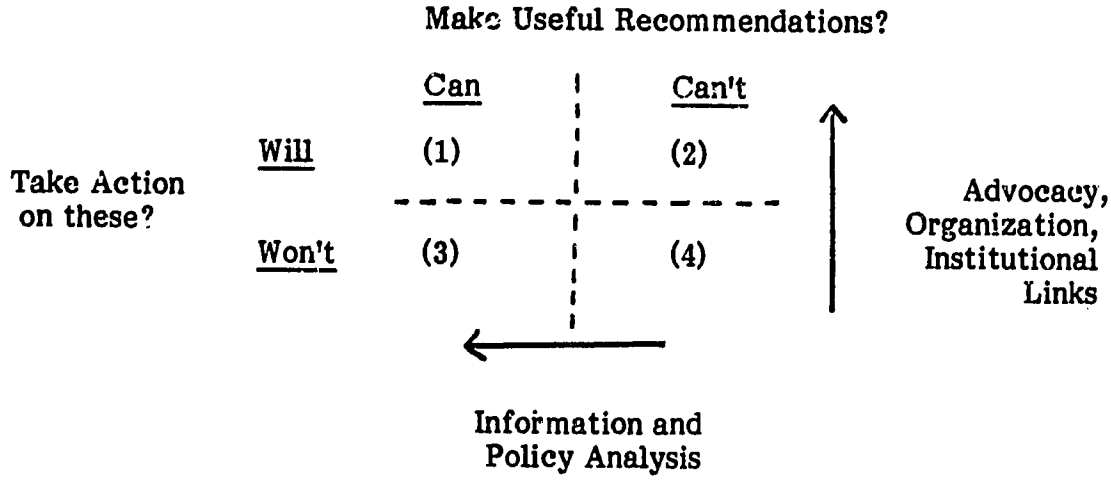


TABLE 1

SOCIAL PROFILE OF THE 10 CANTONES WITH HIGHEST AND LOWEST LEVELS OF HEIGHT RETARDATION IN CHILDREN ATTENDING FIRST GRADE OF PRIMARY SCHOOL. HEIGHT CENSUS OF 1979 AND POPULATION AND HOUSING CENSUS OF 1973 COSTA RICA

	PERCENTAGE				
Canton	Height Retardation	Illiteracy	Poor Dwelling	Dwellings without Latrines	Dwellings without Running Water
High Height Retardation					
Coto Brus	24.6(1045)*	17.9	20.2	39.2	78.2
Los Chiles	23.1(485)	34.8	15.8	53.3	88.8
Buenos, Aires	23.0(824)	23.4	29.2	51.6	84.2
Aserri,	22.8(758)	12.6	17.4	15.8	11.8
Pocosi	22.1(1137)	14.7	15.3	18.9	61.8
Turrubares	21.7(184)	30.1	17.4	37.4	45.0
Guatuso	21.6(259)	28.6	16.1	44.0	87.2
Guácimo	21.3(286)	17.5	14.9	21.3	54.7
Tarruzú	21.2(212)	15.7	18.4	18.0	17.8
Golfito	21.0(891)	16.7	11.8	23.9	38.0
Low Height Retardation					
Tibás	7.0(884)	3.7	10.2	0.7	1.0
Moravia	6.9(435)	3.1	7.8	1.9	5.4
Alfaro Ruiz	6.8(133)	6.8	5.8	2.4	12.2
Montes de Oca	6.4(466)	3.0	8.2	0.8	1.7
Barva	6.4(282)	6.2	11.2	1.8	1.8
Central San José	6.3(4193)	3.5	10.4	0.4	0.9
Atenas	5.7(297)	10.5	15.3	7.4	14.8
Goicochea	5.3(1183)	3.7	9.2	0.7	1.5
Palmares	4.9(268)	6.2	8.4	7.1	8.0
Belén	4.4(203)	5.3	5.9	3.6	1.9

*In parenthesis the number of cases of children evaluated by Canton in Height Census of 1979.

From Valverde, V. et al. Bol. Inf. SIN 2(10): 4-10 (1980)

TABLE 2

ASSOCIATION OF WATER SUPPLY AND TOILET FACILITIES WITH MALNUTRITION

Percent Households with Mean Wt/Age<80% by Water and Toilet

Toilet	Water Supply		Total
	River/Spring	Piped Well	
Pit/None	56.4	38.0	41.7
n	55	221	276
Closed pit, Antipolo, Flush	51.4	33.7	35.4
n	35	338	373
Total	54.4	35.4	38.1
n	90	559	649
	14%	86%	

$X^2 = 6.857$
$p < 0.01$

Source: Garcia et al. 1982 Cornell Nutritional Surveillance Program Working Paper Series No. 12.