

PAPERS PRESENTED

INTRODUCTION*

PREVENTIVE NUTRITIONAL SURVEILLANCE

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1. The Concept

It would appear that, as happens with any living being, interest and concern for nutritional problems are born, develop and die. In the decade of the 50's the major worry to which great efforts were dedicated was the development of new protein sources, mainly for the weaning period. In the decade of the 60's, attention was directed to the organization of pilot projects of the so-called "applied nutrition programs", whose philosophy entails coordination at a community level of the nutrition activities in the health, agriculture and education sectors. In the decade of the 70's, concern in regard to the nutrition of population groups has been centered on the national food and nutrition policies and, among them, on the "Nutritional Surveillance" or "Nutritional Epidemiological Surveillance" or "Preventive Nutritional Surveillance", whichever name may be used.

This aspect of the naming of the program could well be the subject of discussion and adoption of a decision at the SLAN level.

The "Preventive Nutritional Surveillance" emphasizes the collection and analysis of indicators that can *predict* the possible deterioration of the nutritional status of the populations, and not only on the indicators that mark the *history* on the actual situation.

In the field of malaria the concept could be illustrated by pointing out that the splenomegaly index in a given population indicates the *history* of its chronic endemicity; the parasite index shows us the actual malarial infection, and the population index of anopheles mosquitoes in the area, permits *prediction* of an eventual epidemic.

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In the nutrition field, we have been dedicated for a long period of time to detecting nutritional problems that were past *history* and very little to identifying warning signs which permit prediction of a *future* deterioration of the nutritional status.

2. Definition

The FAO/UNICEF/WHO Committee of Experts which met in Geneva in October, 1975, defined surveillance as follows:

"To watch over with attention, authority and, often, with suspicion."

This obviously is a dictionary definition of the word.

For our purpose, we consider more suitable the definition of Jaime Ariza. This reads:

"By food and nutritional surveillance is understood the permanent and regular process of compiling, analyzing and distributing the necessary information to maintain an up-to-date knowledge of the production, provision, distribution and consumption of foods, as well as of the nutritional status of the population; to identify its changes, causes and tendencies and predict its possible variations, in order to decide in time on the preventive or corrective actions according to the case" (PIA/PNAN -1, No. 2, 1976).

This definition might be subject of discussion during the meeting.

It is important not to confuse surveillance with evaluation. One evaluates the success or failure of an operation but surveillance of a given situation is independent of whether or not there exist courses of action to modify or correct the situation.

Of course, many indicators might be used in surveillance as well as in evaluation, but the selection criterium of the indicators may vary. In the evaluation process only those indicators that measure changes of the planned objectives will be useful. In the surveillance process the spectrum of indicators is much wider.

3. Evaluation of the Indicators to be Used

There are a great number of indicators, many of which have not been evaluated in regard to their sensitivity, specificity, coverage, cost and, above all, their "threshold of alarm". This criterium of "threshold of alarm" is absolutely indispensable to interpret the indicators that would permit prediction of possible future deterioration of the nutritional status. At what level would an increase of unemployment lead to a worsening in the nutritional situation? How many months of drought would allow us to point out the "threshold of alarm"? Other examples could be given, but we believe that these are enough to illustrate the phenomenon.

For the above-mentioned reasons, in the Research Center of the Postgraduate Food and Nutrition Planning Course of the Universidad Central of Venezuela, and with the financial aid of the National Scientific and Technological Research Council (CONICIT) of Venezuela, a research project has been programmed.

Its fundamental purpose is to evaluate the indicators that have been used and to determine, for each one of them, its sensitivity to changes, its objectivity, specificity, coverage, its cost and, finally, to establish certain criteria for identifying the "threshold of alarm".

4. The Single Indicator

For some time, economists, planners and politicians have been calling on workers in nutrition for the integration in one single indicator, of the nutritional situation of a given country. The subject is of great interest, but the task will be difficult.

The Research Institute for Social Development of the United Nations with headquarters in Geneva, already tried to weigh a series of standard of living indices, in order to achieve a single indicator for "quality of life". This effort was very useful and served to point out the great difference existing between the Gross National Product, as an economic indicator, and the weighted Index of Social Development.

As for a single indicator which would permit us to show the nutritional history of a given community, this author suggested some years ago at the Conference on Nutrition and Development held at the Massachusetts Institute of Technology (MIT), that the height of a 7-year-old child should be an idea worthy of consideration. The most interesting aspect of this indicator is that it is closely correlated with the Social Development Index of the Geneva Institute to which I have already referred. Arguments in favor of such an indicator appeared in the paper presented by this author at the MIT Conference (which has now been published) and it is not necessary to repeat them here.

It would be more difficult to imagine a single indicator for the present status and, still more difficult, a single indicator as the "threshold of alarm". Any way, it is a subject that merits research.

5. Steps Taken in Venezuela for the Organization of a Surveillance System

Four important steps in this direction have been taken in Venezuela:

First: By Presidential Decree, a Biological Development Foundation for Venezuela has been created. This Foundation has already planned a national survey which will cover the physical, functional and biochemical examination as well as other parameters of around 80,000 subjects. This will make available basic information of great importance, and it is to be hoped that the same Foundation would carry out periodic surveys in the future.

NUTRITIONAL INDICATORS (Cont)

Indicators	Cover- age	Period- icity	Easiness to obtain	Cost	Object- ivity	Speci- ficity	Sensiti- vity
6.3 Infant mortality by social strata 6.4 Mortality of children 1-4 years of age			Difficult				

Second: The Planning Organization of the country, CORDIPLAN, has prepared a catalog of social indices, among them the nutrition indicators. The latter will form part of what is known as "social accounts", which will complement the "economic accounts".

Third: The Venezuelan National Institute of Nutrition has planned the organization of a Preventive Nutritional Surveillance Unit, which would deal with the centralization of all the data received from different sources.

Fourth: With the collaboration of CONICIT, the Interdisciplinary Postgraduate Course in Food and Nutrition Planning of the Universidad Central of Venezuela has established a research group to evaluate the selection criteria of the nutritional indicators. It is hoped that these research lines will be useful for the National Nutrition Institute, CORDIPLAN, and other organizations.

6. Notes for a Bibliography on Surveillance

It would be useful for SLAN to collect the existing information about Preventive Nutritional Surveillance. In the coming years the number of publications will considerably increase.

This bibliography would have to be separated in two groups: that related to indicators, and in another group, that related to *Surveillance Systems*.

With respect to the first list, this could be initiated with the bibliography that appears in the INCAP paper entitled "Indicadores Mínimos del Estado Nutricional" (INCAP Publication E-827). Although incomplete, it would be a good start.

As for the second bibliography, some of the important papers on the subject are:

1. Center for Disease Control. *Nutrition Surveillance*. Atlanta, Georgia, CDC (DHEW Publication No. (CDC) 75-8295) (Periodic publication).
2. Mason, J. B. Vigilancia de la nutrición. *Aliment. Nutr. (FAO)*, 1 (4):24-27, 1975.
3. *Methodology of Nutritional Surveillance*. Report of a Joint FAO/UNICEF/WHO Expert Committee, Geneva, 1-10 October, 1975. Geneva, World Health Organization, 1976, 66 p. (Technical Report Series No. 593).
4. Ariza Macías, J. La necesidad de establecer un sistema de vigilancia alimentaria y nutricional. Presented at: *V Congreso Brasileiro de Nutrición y VIII Congreso Brasileiro de Nutricionistas, Porto Alegre, September, 1976*. (Mimeographed document).

5. **Burgess, H.J.L.** *Surveillance of the population at risk: the community.* (Chapter 18). In: *Nutrition in Preventive Medicine. The major deficiency syndromes: epidemiology and approaches to control.* G. H. Beaton and J. M. Bengoa (Eds.). Vol. II. Geneva, World Health Organization, 1976. (WHO Monograph Series No. 62).
6. **International Union of Nutritional Sciences.** *Proceedings of I.U.N.S. Committee on Nutrition Surveys and Surveillance held 11-15 March in New Delhi, India.* Kashmere Gate, New Delhi, Cambridge Printing Works, 1974, 38 p.
7. **Symposium on Epidemiological Surveillance of National Nutrition Problems.** *IX International Nutrition Congress, Mexico, September 3-9, 1972.*