

NUTRITION COMMUNICATION PROJECT

Haiti
Nutrition Education

Project Planning: Guide for Investigators
Nutritional Problems, Dietary Practices and
Socio-Economic Constraints

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NUTRITION EDUCATION/SOCIAL MARKETING FIELD SUPPORT PROJECT
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I. Introduction and Summary

USAID-Haiti wishes to fund a nutrition education project in the country, and has requested the Academy for Educational Development to design it.

Such design will require the identification of:

(a) the particular nutritional problems to be addressed and the specific behavioral changes sought;

(b) the means to provide information concerning these behavioral changes; and

(c) the institutional framework within which this information is to flow.

The identification of these program elements will require the collection of data in the following areas:

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(a) the incidence and prevalence of nutritional disorders and dietary habits which contribute to infant and child malnutrition;

(b) the social and economic factors which limit the ability of any given family to modify these dietary habits and hence limit the effectiveness of education;

(c) the incidence and prevalence of infant diarrheas; related socio-economic, demographic, and other variables; patterns of prevention, treatment, and cure;

(d) the present status of health education in the country: the way in which health, nutrition, and population education is currently carried out;

(e) the constraints to this education - problems of finance, personnel, training, materials, or service delivery management - which limit either its quality or its coverage or both;

(f) the present status of programs - such as child surveillance and child nutrition which, although not educational in design, affect the ways in which education can be effected; and constraints which affect their quality and coverage.

This document is concerned with (a) - (c) only - a review of the situation regarding nutritional problems and the socio-economic factors influencing them. Annex I, provided for reference and overall context, describes the methodology to be used for reviewing the status of existing health and nutrition education programs and of the infrastructure through which they are executed.

II. Discussion

Based on the recent history of nutrition education in less developed countries, there are certain dietary practices which are particularly amenable to nutrition education. In each case, either the social and economic constraints on an individual's ability to change have been limited; or the benefits of the change have been perceived to so outweigh the costs (or both); and people have been able to change traditional habits. These practices are: infant weaning, dietary management of infant diarrhea; and breastfeeding. Although other nutritional problems, such as poor maternal nutrition, can also be addressed by providing information on a balanced and sufficient diet, such problems are more constrained by income than infant feeding or breastfeeding (1).

1. For an adequate diet, pregnant women need increased quantities of food as well as foods of considerable diversity. To provide both this quantity and this quality requires more income than most low-income families have. Therefore, whereas campaigns to promote maternal nutrition might be appropriate in higher-income developing countries such as the Phillipines, they may not be appropriate in large parts of Africa or Haiti.

Proper infant weaning and dietary management of diarrhea require a relatively small investment of family resources, for the amount of food required to supplement breastfeeding is minimal. Although there are costs implied in the additional preparation and storage of food for infants as well as in the time required for feeding, these costs have been, in many cases, manageable and far more acceptable than those required to provide a pregnant woman with a diet rich in calories, proteins, and vitamins.

The continuation of breastfeeding past an initial short period has also been successfully promoted through education. Recent studies have shown that both high- and low-income mothers have begun to breastfeed for longer and longer periods, largely due to the understanding that bottle-feeding is a major contributing factor to disease. These findings suggest that although breastfeeding may represent a cost (mothers who are employed in certain jobs cannot breastfeed; breastfeeding on demand may take 3-4 hours per day), the perceived benefits of a healthy child (either in the value of the child or the value of medical payments saved) plus the savings realized through limiting purchase of infant formulas apparently outweigh the costs of breastfeeding.

It is assumed that shortened breastfeeding, insufficient food supplementation of breastfeeding, and improper dietary

management of infant diarrheas all exist in Haiti. They have in the past, and there is no reason to expect that they have changed, since the overall socio-economic conditions in the country have not changed substantially in the last 10 years. It will be important, however, to substantiate this assumption through a review of rates of infant malnutrition and diarrhea (2); by assessing prevalent dietary patterns for weaning and for dietary management of infant diarrheas; and by reviewing prevalent breastfeeding practices by key socio-economic variables such as income, residence (urban-rural), place and type of employment, family size and composition, etc.

As important, however, will be the determination of major limiting factors to the adoption of more appropriate dietary practices, with particular emphasis on cost. Proper supplementation of mothers' milk, for example, is as much a function of the cost of preparation, storage, and feeding time as it is the type and quantity of food available. Ideally, the infant should receive many small feedings per day to facilitate digestion and maximize the assimilation of nutrients. Either food is taken from the common meal, divided into separate portions, and stored for the day; prepared in separate meals for the infant; or purchased in the market as processed food. In the first case,

2. A high incidence of infant malnutrition may indicate either poor nutritional practices, high rates of infectious disease, particularly diarrhea, or both. Persistent rates of malnutrition in areas where diarrheal rates are low would indicate nutritional disorders.

storage is a problem. If the main meal is taken at night, food cannot be stored overnight and be expected to not to spoil before the next night. If it is to be stored properly, the cost of storage will go up. With multiple preparations of separate infant food, fuel and labor costs increase. Child care costs increase, even if the caretaker is a family member because of the opportunity costs of this labor. Finally, processed food purchased in the market (cookies, for example), represents a significant expenditure in terms of total family food costs.

Intra-family distribution of food is also governed to a large degree by economic factors and has traditionally favored male labor. Allocation of family child-care and child feeding responsibilities is also based on economic considerations. Older women and young girls - considered less productive economically - usually take care of children and are responsible for many nutritional decisions.

In order for individuals to use information about improved weaning or dietary management of diarrhea (which involves the same repeated feedings, at an even increased rate, of the infant), they must be able to have an economically viable way of doing so.

The ability and willingness of women to continue breastfeeding is also largely a function of cost, and has a particular relationship with type and place of employment. Women in the

organized, industrial sector, for example, where rigid work and productivity schedules have militated against workplace child-care centers, time-off for breastfeeding, etc., classically have lower breastfeeding rates than women in other labor sectors. Breastfeeding successes have also been considered related to a decline in hospital-promoted infant formulas and to a decline in the promotion of infant formulas in general.

Long-standing belief systems further confound the introduction of health and nutrition information, and such information can only be utilized if it complements and does not conflict with traditional concepts concerning the origin, treatment, and cure of disease.

The collection of data useful for the preparation of nutrition education programs, therefore, will have to focus as much on the constraints or limitations to behavioral change as the incidence and prevalence of nutritional problems. Only through an understanding of these constraints can the education planner know what information can be utilized effectively.

The subject of Vitamin A deficiency will be treated somewhat differently. Vitamin A deficiency is regarded as a nutritional problem severely constrained by economic limitations. Classically, the market price of vegetables, the most readily-available source of dietary Vitamin A, is often high, thus discouraging purchase

by low-income families. Vegetables produced in kitchen gardens and destined, in principle, for home consumption, are frequently sold in the market because of these high prices. Non-marketed foods, rich in Vitamin A, such as mangoes, are seasonal. Fish products are rarely available inland. To complicate matters further, Vitamin A, to be efficiently utilized by the body, must be consumed in the presence of fat, a nutrient often lacking in poor diets. Nutrition education, designed to increase dietary consumption of Vitamin A, has often had less than complete success.

Vitamin A capsule distribution programs, however, have been able to reduce the incidence of xerophthalmia largely because of the body's ability to store Vitamin A. Education programs alerting people to the importance of Vitamin A in children's diets and informing them how and where to get the capsules are therefore essential. Similarly, education programs to support and encourage the consumption of vegetables grown in kitchen gardens financed in part by development projects, can be useful.

In both cases, education or information accompanies or follows the development of projects designed either to provide supplementary Vitamin A through capsules or to provide kitchen gardens. This research, therefore, will identify those areas where Vitamin A deficiency is a problem. USAID will then determine the type of nutrition intervention needed. At a later date an informational strategy will be developed.

III. Investigator Checklist

A. Major activities

1. A review of the incidence and prevalence of infant malnutrition and infant diarrheas by geographical area and socio-economic variables.

2. A review of current practices of weaning, diarrhea control, including dietary management of infant diarrhea, and breastfeeding - the priority nutritional areas to be addressed by an education program.

3. A review and analysis of those socio-economic factors which limit individual change in these three nutritional areas.

4. A review of the incidence and prevalence of Vitamin A deficiency in the country.

5. Based on the above, an identification of the particular, specific dietary practices to be addressed in an education program and the recommended changes to be promoted.

B. Data collection

Information concerning the incidence and prevalence of dietary practices should be collected with as much specificity and disaggregation of data as possible. Rural-urban (broken down by Port-au-Prince and other urban; and agricultural and other rural) and regional distinctions, as well as income, female employment, family size, child spacing, and other socio-economic variables should be used to compare data.

Nutritional Status

* overall nutritional situation in Haiti with particular focus on children under 5: rates of protein-calorie malnutrition, xerophthalmia, goitre, other major disorders by region, age, sex, urban-rural distribution, etc.;

* relationships or correlations, where possible, between these nutritional disorders and income levels, agricultural production, demographic characteristics, etc.

Infant diarrheas

* estimated rates of infant diarrheal infection, by age, sex, region, family size and child spacing, other socio-economic variables;

* patterns of prevention, treatment, and cure; home

preparation of ORT; patterns of market purchase of ORT; dietary management of diarrhea - all information collected by socio-economic, geographic, other related categories;

* belief systems underlying prevention, treatment, and cure: why certain traditional interventions are taken; why other interventions are avoided;

For weaning and dietary management of diarrhea

* type of food given during weaning and infant diarrheal episodes; frequency, periodicity, duration, and quantity of food given by infant age group (i.e., 3-6 months; 6-12 months; 12-18 months);

* infant feeding practices: responsibility for selection, preparation of infant diet (e.g. mother, siblings, elders, other); overall child care responsibility for infant;

* belief systems regarding weaning and feeding during diarrheal episodes: reasons underlying feeding patterns including why certain foods are given, not given;

* family food availability: total nutrients per capita; types of food, quantities;

* family dietary patterns: intra-family distribution of food and hence availability of food (hence potential availability of infant food); the proportion of packaged food to total food in family diets; types of family food consumed and their acceptability for use as weaning foods for infants;

* family expenditures: both food and non-food items (leading to an analysis made of the ability to pay for infant nutrition); food expenditures broken down, where possible, by family-produced food, purchased, non-processed food, processed food;

* female labor patterns: type of employment (e.g., agricultural, industrial, trade, etc.) and time parameters. A review of female participation in agriculture, for example, should include type of work, hours of work, schedule of work by time of day and by season.

For breastfeeding

* onset of breastfeeding; frequency, duration, time-per-feeding;

* onset of bottle-feeding; type of formula, where purchased, how prepared, how stored; frequency, quantity-per-feeding, periodicity;

* female employment: analysis by sector; also for total employment hours, distance of employment from home and time of travel, etc.;

* market availability and promotion of infant formulas: market penetration of infant formulas and cost, by region; type and extent of advertising for infant formulas;

* consumer behavior regarding infant formula: percentage of women purchasing, by region. Frequency of purchase. Proportion of total food expenditures of infant formulas. Place of purchase of formulas;

* legislation concerning infant formulas: government regulation concerning infant formulas - distribution in hospitals, maternities; control of national advertising; degrees of compliance;

* belief systems, including onset, duration, etc. of breastfeeding; perceived sufficiency of milk; lactation during maternal illness; value of colostrum and practices relating to it; other.

For Vitamin A deficiency

* clinical records: percentage children, adults with xerophthalmia;

* nutritional indicators: consumption of Vitamin A-rich foods; consumption/non-consumption of foods which facilitate/block utilization of dietary Vitamin A;

* agricultural/market indicators: total production Vitamin A-rich foods; market prices;

* income/expenditure indicators: food expenditures as proportion of total expenditure budget; Vitamin A-rich foods as proportion total expenditures, if purchased;

C. Sources of information

Given the long history of nutrition interventions in Haiti, many of which have been sponsored by USAID, it is expected that a substantial amount of data exists concerning the incidence and prevalence of nutritional disorders, the dietary practices contributing to these disorders, and the socio-economic factors constraining behavioral change. Data collection, therefore, will be restricted to a review of existing material and, where possible, computer manipulation of data to produce new information.

1. Review of nutrition and food consumption surveys; dietary studies: These surveys and studies, done either by Government of Haiti agencies (such as the former Bureau of Nutrition, the present Division of Family Health, the Census Bureau, Bureau of Statistics, etc.), by donor agencies (development banks, international development agencies, bi-lateral donors, and private, voluntary agencies), or by private businesses, should provide information either on a national or regional scale on overall nutritional status, by region; on average household and per capita food consumption; and on weaning and breastfeeding habits. There is unlikely to be much material on dietary management of diarrhea per se, but information from both studies on diarrhea and on weaning should be available.

National household consumption surveys, for example, may break down food expenditures into processed and non-processed foods by urban and rural residence, thus giving possible insights into the purchase of processed weaning foods. Private market surveys may provide similar information. Smaller studies, often restricted to an area in which a project was executed, are good sources of information on socio-economic or anthropological factors related to nutrition and health and are available from the donors who sponsored the project.

If large studies exist and if access to raw data is possible, attempts should be made to correlate factors through statistical

methods (regressions).

2. Review of health surveys and studies: Data on incidence and prevalence of diarrheal disease, by region, age, sex, etc., should be available from national and regional surveys. As above, more particular information on diarrheal treatment and care and on belief systems will likely be available only for restricted areas and small samples and done within the context of donor-assisted projects.

3. Review of socio-economic and demographic surveys: as suggested above, data will be required on household expenditures, employment characteristics and trends for women, and socio-anthropological data concerning family organization and child rearing practices.

Data is likely to be available from a variety of different sources: national sample surveys, labor department surveys, agricultural surveys, demographic and population surveys. Specific socio-anthropological data may be available from various ministries concerned with health, population, social welfare, or education.

4. Review of market surveys: Although access to these surveys might be limited because of their ownership by the private sector, public or international sector studies might be available on market penetration of consumer products (such as cookies, infant

formulas, soft drinks) that have an implication for both weaning and diarrhea control (certain soft drinks may be substitutes for oral rehydration solutions).

E. Recommendations concerning nutritional problems and specific dietary practices to be addressed

Based on the above, recommendations will be prepared concerning the essential elements of a nutrition educational program for Haiti, breaking down these recommendations, where possible, by the socio-economic and demographic categories in which data were analyzed - i.e., urban-rural, by income, and region.

It is important to emphasize that although it is expected that substantial data will be found concerning nutritional habits and dietary practices, the quality, reliability, and hence comparability of those data is not known. If it is found that insufficient data exist to permit the formulation of specific nutrition educational messages (that is, if little conclusive is known about the constraining factors of income, type of employment, etc. relative to weaning, dietary management of infant diarrheas, or breastfeeding), then one particular region or city of Haiti will be selected, new, original research will be done in that particular area, and a program restricted to that area developed.

Annex I

Data Collection Part II

Means of Communication and Institutional Framework

In addition to the quality and appropriateness of the nutrition messages developed, as above, there are four major factors which directly influence the way information flows and the success with which it is received by the client:

1. The quality of mass media, print, and other produced materials. Although messages may be appropriate and fit well within the socio-economic constraints of the population, the way in which they are expressed orally and visually will ultimately determine how they are received, considered, and accepted.

2. The frequency and variety with which these media are produced. Successful mass media and print campaigns have been those in which a variety of media have been produced and distributed at a frequency which guarantees frequent exposure to different treatments of the same message. Although cost-benefit factors apply, and there is a threshold beyond which the cost of each additional input is disproportionate to its benefit, variety, continuity, and persistence can insure greater impact.

3. The quality of the personnel who carry out individual or

group education. This quality, in turn, is a function of the qualifications of the personnel, their training, and their supervision.

4. The management of health service delivery systems.

Nutrition or health education does not exist in a programming vacuum. It is but one of the many responsibilities of health service staff. As such, if that health personnel is overtaxed, underpaid, and poorly supported with supervision, transport, or materials, all of the activities carried out will suffer. In addition, since health education is often considered the least important task in a portfolio which includes much curative and direct preventive care (vaccinations, prenatal examinations), in a situation of bad management, education suffers most. As importantly, badly run health centers offer little opportunity for any kind of meaningful educational contact to occur between health personnel and client. Waiting periods are often long with few acceptable accommodations and amenities. Time per consultation is short, and the system of referrals inefficient because of a lack of time to determine underlying causes of illness and correlated factors. In short, successful health and nutrition education is often a direct outcome of improved health service delivery.

4. Presence of associated support programs. Although health education can be successful by itself, it has been shown to be

most successful when supported by other related programs. Supplementary feeding programs with free distribution of food offer an incentive to mothers to come to health centers and provide a focus for education. Nutrition rehabilitation centers provide feeding services for the infant, but also offer an opportunity for education. Vaccination programs in health centers (as contrasted to Expanded Vaccination Programs) often give a credibility to these centers which they may not have had before. Education is given more credibility because the health center personnel is considered credible. MCH/FP services provide the same focus and credibility. Family planning services, particularly, offer a similiar way to attract mothers, to provide a focus for discussions of preventive medicine. Child surveillence programs and growth monitoring, designed to detect developmental problems before they occur, have been shown to be effective tools for eliciting a participation in preventive health programs and for nutrition education.

Although these are well-known elements of success, few health/nutrition education programs are characterized by them. Many programs, because of lack of finance and trained personnel, are unable to produce the quality media required, field the level of personnel appropriate for tasks indicated, provide the training of this personnel, or provide the management support necessary.

In addition to the expected constraints of finance and

personnel, many health/nutrition projects have been characterized by the following negative attributes:

1. Lack of institutional definition: If a ministry of directorate of health has a division of health education it is often strong in materials production, but weak on research, planning, development, training, and evaluation. Administratively, it is often cut off from those other divisions which could provide such activities and which themselves are limited financially. Such divisions of health education must establish de facto relationships with ministries of information, rural development, and social affairs. Donors which wish to develop health or nutrition education programs but are used to contracting with one particular ministry, often develop projects which are too uni-dimensional. Donors which try to distribute project funds among many ministries run into inter-ministerial rivalries which tend to weaken project effectiveness.

2. Donor support: Donor agencies are often contributing factors to the problems of institutional confusion. Haiti is no different, with many donors funding individual divisions of departments, let alone ministries. The competition for funds increases jealousies and inhibits cooperation. Private voluntary agencies pride themselves on independence from government bureaucracy, but in their singularity of purpose often act contrary to national interests and, at the very least, in conflict with

other agencies and institutions active in the same field.

Data collection goals, therefore, will be:

-- to determine how previous health and nutrition education projects have found ways to successfully overcome these constraints and achieve the ideal conditions suggested above;

-- to determine, in the complex institutional context of Haiti, within which institutions - public, private, voluntary or a combination of all three - can a USAID effort most likely succeed, be complementary to existing programs, and not conflict with them;

-- to determine, based on the above, the particular elements of a nutrition education effort which could most benefit from USAID support. Although ideally one would like to develop and execute a nutrition education program in its entirety - supporting, research, development, media production, training, management and logistical support, etc., such a comprehensive effort might not be possible. Sufficient research may already exist; other donors may have already embarked on national health education training; certain regions of the country may be well-covered by private voluntary agencies.

In order to achieve the above objectives, the following

activities will have to be undertaken:

1. Meet all Government of Haiti officials involved in health, population, or nutrition education. Where appropriate, meet with officials in non-health ministries (education, agriculture, rural development, etc.) to review existing education/extension programs and their relevance to nutrition education.

2. Meet all international, bi-lateral, and private, voluntary agencies involved in health, population, or nutrition education.

3. Meet with those government agencies and foreign assistance agencies involved in related activities (MCH/FP, supplementary feeding, nutrition rehabilitation, growth monitoring, ORT, etc.)

4. Make selected field visits.

5. Utilizing information collected concerning the incidence and prevalence of nutritional disorders and of dietary practices, and based on the investigations undertaken in 1 - 4, above, prepare a detailed implementation plan, including institutional, management, personnel, administrative, and budget considerations.