



II NUTRITION

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INTRODUCTION

Haiti is one of the most underdeveloped countries in the western hemisphere and has some of the worst indices of social deprivation. An estimated 80% of the rural population subsists below the World Bank poverty line. Since the political and economic situation has deteriorated drastically, the underdeveloped Haitian economy has now become one of subsistence and survival.

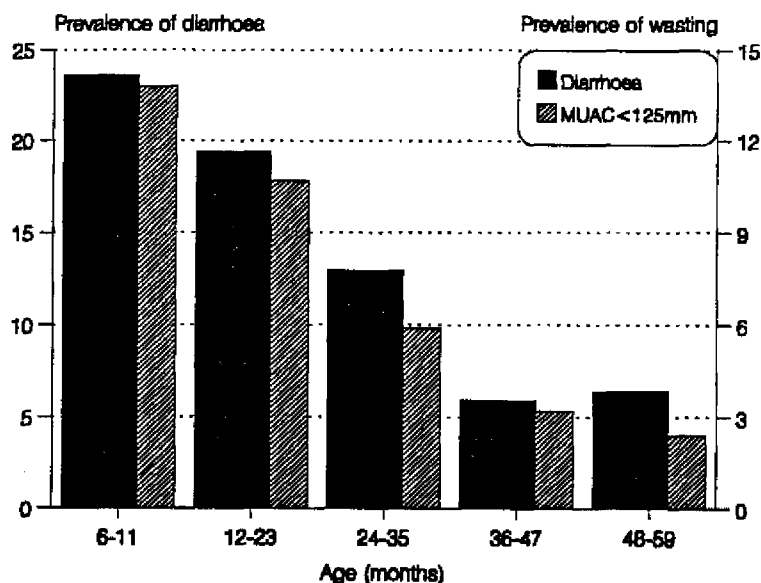
Despite efforts by humanitarian agencies, there are concerns about the effects of the politically induced economic crisis on the nutrition and health conditions, particularly of women and children. Based on two recent situation analyses, this proposal outlines immediate interventions within the health sector for the improvement of child and maternal nutrition (PAHO/WHO, 1994; OPS/OMS, 1994).

1. NUTRITIONAL PROBLEMS AND PRIORITIES

1.1. CHILDHOOD MALNUTRITION

Recent morbidity, mortality and anthropometric studies have demonstrated that health and nutritional problems are concentrated in young children less than 24 months of age. Diarrhea has been associated with 47% of all child deaths between 1-59 months of age (Cayemittes and Chahnazarian, 1989). Most of the under-five deaths are also associated with malnutrition. The synergism between malnutrition and diarrhea is demonstrated in Figure 1.

Poor nutritional conditions, including high exposure to infectious diseases, inadequate child care, and faulty feeding practices, are direct causes of children's growth and developmental retardation. Factors that adversely affect child care and feeding practices include maternal absence, budgetary constraints, and inadequate information. Due to the economic crisis, mothers are forced to intensify their activities outside the home. Consequently, household chores are accommodated around the intensified working schedules. This often results in compromised child care and feeding practices, due to lack of correct information on children's needs. The implications are hazardous: exclusive breast-feeding hardly lasts beyond one month, bottle feeding is practically universal, children are cared for by other (often incompetent) caretakers, the child is given inadequate foods and is fed too infrequently. For new mothers, these incorrect child care practices easily become the norm if they are not discouraged (PAHO/WHO, 1994; MotherCare, 1990).



Source: Gayemittas & Chahrazarian, 1987/CDC et al., 1993

Fig.1 Point prevalence of diarrhoea (1987) and wasting by MUAC < 125mm (1990) in preschool children by age

As a result, one in every five children under two years are severely wasted, and by the age of five, 40% of children demonstrate serious linear growth retardation (CDC, et.al., 1993). It has also been shown that childhood malnutrition is associated with functional outcomes in adult life such as poor educational performance, low productivity, retarded psychological development, etc. In other words, the malnourished children of today are the less competent adults of tomorrow.

1.2 MATERNAL MALNUTRITION

Improving child care cannot be achieved without taking care of mothers. Their health and nutritional status are important determining factors for children's growth and development. Data on maternal nutrition is limited to

two indicators; (i) the prevalence of low birth weight, and (ii) the prevalence of anemia.

Low birth weight is associated with mothers' pre-pregnancy nutritional status and dietary intake (or weight gain) during pregnancy. An estimated 15% of all newborns (233,000) weigh less than 2.5 kilogram and are at high risk of dying.

The iron status is associated with both the quality and quantity of dietary intake, and thus, a proxy indicator of household food security. Approximately, 35-40% of adult women suffer from anemia, a public health problem whose importance is often underestimated (PAHO/WHO, 1994; USAID/VITAL, 1993; DeMaeyer, 1989).

Maternal malnutrition is mainly an outcome of the economic environment of the household. Due to the economic hardship, women are forced to return to jobs shortly after delivery. Consequently, the post-natal recovery period is considerably shortened. In addition, breast-feeding frequency is reduced, which has an adverse effect on child spacing. This will add up to the maternal deprivation syndrome. Furthermore, poor households spend a high proportion of their income on food and are, therefore, particularly vulnerable to adverse changes in their incomes and/or food prices. The most vulnerable group includes women of child bearing age. Their needs for sufficient nutritious food following pregnancies, lactation, and physiological cycles, are undoubtedly compromised due to budgetary constraints at the household level (PAHO/WHO, 1994).

1.3 IODINE DEFICIENCY

Iodine deficiency is a compounding factor of malnutrition and malnutrition-related outcomes, particularly among vulnerable groups in the mountainous interior of the country, where iodine deficiency is a moderate severe public health problem (CAPS, PAHO/WHO, UNICEF, 1994). Iodine deficiency affects all people equally, but the health outcomes are more severe among women of child-bearing age and young children. They include pregnancy complications, low birth weight, infant mortality, cretinism, deaf mutism, and mental retardation.

2. OBJECTIVES

The overall goal is to reduce childhood and maternal malnutrition. Innovative interventions are urgently needed to reverse the rapidly deteriorating nutritional environment of mothers and children and increase mothers' capacity to take better care of their children. This implies that mothers must have access to (and control over) essential resources such as correct information, income, and appropriate technology. The general objective of the nutrition recovery program is:

"To protect children's growth by improving the nutritional environment of mothers and children in order to prevent linear growth retardation, malnutrition, and malnutrition-associated morbidity and mortality."

Specific objectives include:

A. To improve mothers' caring capacity by enhancing their access to, and control over, essential resources such as correct information, income, and appropriate technology in order to prevent growth faltering in children.

B. To reduce maternal malnutrition by enhancing adequate dietary intake of child-bearing age women from impoverished households in order to increase birth weight and give newborns a better start in life.

3. STRATEGY

3.1 INTEGRATION OF SERVICES

The public sector has experienced an almost total break down in the health infra-structure, while the country's health and nutrition situation has continued to deteriorate. Therefore, services need to be integrated, rather than vertically implemented, to address simultaneously major health and nutrition problems in mothers and children.

Nutrition-relevant interventions for the protection of child growth and development such as breast-feeding promotion, weaning education, vitamin A distribution, growth monitoring, and on-site feeding will be linked to the prevention and control of major infectious diseases, including diarrhea, pneumonia, and measles. The Ministry of Health of Haiti, PAHO, UNICEF, USAID, and major NGOs will work together to develop and implement a comprehensive strategy for the integrated management of the sick and healthy child approach.

Similarly, where possible, nutrition-relevant actions for women, including iron supplementation, prenatal nutrition monitoring, nutrition education, and/or food distribution will be linked to health interventions such as family planning, prenatal and postnatal care. Collaboration will include the Ministry of Health of Haiti, PAHO, UNFPA, major NGOs in the health sector, and major food distributing agencies, including WFP, CARE, etc.

Integration allows health agents to efficiently plan household visits, given the logistical problem of Haiti's mountainous interior which cause the inaccessibility of many households and communities. Similarly, households obtain maximum benefit of health workers' visits, as they provide all basic services for children's health.

Furthermore, PAHO will collaborate with the Ministry of Health of Haiti and UNICEF in the preparation and implementation of integrated nutrition projects with nutritional and household food security objectives, e.g., nutrition education with a poverty lending scheme, or nutrition education with a food production and processing program. These projects have a potential of increasing maternal control over various essential resources for better child care. These pilot experiences will serve as a base for the identification of effective approaches to improve child care and nutrition.

3.2 TARGETING

The program targets mothers and children from impoverished families with low incomes and poor access to correct information. The majority of poor households are female headed which means that these mothers have to contend with many, often incompatible, responsibilities. Needless to say, their children are at highest risk of being exposed to inadequate caring and feeding practices. The target population includes around one million households, 1.34 million women of child-bearing age, and 800,000 children under five years of age.

A number of simple and sensitive indicators will be used to identify the most vulnerable households and to monitor their progress in improving the maternal and child nutritional environment. Field observations have shown that these households are not necessarily the most remote. For example, maternal absence, a major determinant of inadequate child care, is associated with the potential of remunerative activities outside the home. These situations are found more often in economically active areas than in remote mountainous areas.

3.3 MONITORING AND EVALUATION

Monitoring is useful if it can detect problems, if the problem can be understood by those who are responsible, and if corrective actions can be undertaken. In other words, PAHO will apply the triple A approach (i.e., Assessment, Analysis, Action) to ensure effective monitoring of program progress.

Monitoring is an integral part of Haiti's newly established community-oriented health infrastructure which is guided by the following principles: services integration, community participation, and equal access to modern health care and information. Therefore, decentralized monitoring systems are needed for various administrative levels. This implies the establishment of a decentralized nutritional surveillance system, which will make use of various information sources, including institution-based management information systems (some of which may need PAHO's assistance) and allow for complementary rapid assessments at National and Departmental level data.

The evaluation strategy is based on the identification of milestones in program implementation that allow for radical decision-making. Depending on the program elements of integrated services and intensified communication, internal and external evaluation studies will be planned and conducted.

4. GLOBAL ACTIVITIES

4.1 TRAINING

Nutrition learning packages will be developed for integration with other health training curricula in the same way as health services are being integrated. For the nutrition learning packages, PAHO will closely collaborate with the Ministry of Health of Haiti, UNICEF, the Haitian Institute for Community Health (INHSAC), and other relevant institutions.

In the context of capacity building, PAHO will support the training of public and private health workers as well as other nutrition-relevant professionals, such as communication officers, statisticians, and food aid personnel. An important guideline in the training strategy is to diversify - rather than monopolize - local research capacity.

Important areas for training are (i) nutrition, (ii) research methodology, and (iii) inter-personnel communication. Apart from curricula development, activities will include material development, training of trainers, and training of

health agents, traditional health practitioners, and other nutrition-relevant extension workers.

4.2 INFORMATION, EDUCATION AND COMMUNICATION (IEC)

Most mothers have no access to correct information on issues like pre-lacteal purgatives, bottle feeding, feeding frequency, etc. Therefore, communication and education strategies are urgently needed to improve breast-feeding, weaning, and child feeding practices, as well as nutritional case management of sick children, and dietary intake during pregnancy.

Many communication strategies aim at increasing (i) awareness through the dissemination of information and messages, and (ii) knowledge through health and nutrition education. However, few communication programs aim at persuading mothers to change behaviors.

PAHO, in collaboration with the Ministry of Health of Haiti and UNICEF, will promote the development of convincing communication strategies. A good example is the nutrition demonstration foyers approach. These foyers are community-based nutrition rehabilitation centers which aim at educating mothers in the principles of household case management. The behavioral change is brought about by demonstrating to mothers the change in their malnourished children. This approach has been successfully tested and implemented in various public and private settings. Other successful communication experiences exist in (i) the promotion of dietary intake of vitamin A rich foods, and (ii) the prohibition of bottle feeding.

At present, PAHO is involved in the formulation of a global IEC strategy, which will be used by the Ministry of Health, existing IEC task forces and/or individual organizations to formulate specific communication strategies. PAHO will provide assistance for communication-relevant activities including formative research, inter-personnel communication training, material development, mass media utilization, etc.

The communication strategy includes advocacy to generate and ensure the administrative and socio-political commitment and leadership for program implementation. Hence, the advocacy targets high-level decision-makers to develop and reformulate norms and standards for breast-feeding, infant formulas, growth monitoring, food aid, universal salt iodization, etc. Alliances have been built with other interested agencies such as UNICEF, UNFPA, and various local associations.

Social mobilization is included to consolidate existing alliances and actively seek new partners and support for bringing about a social movement

for the protection and promotion of child growth and development. Existing collaboration with NGOs will be strengthened and expanded to increase coverage of integrated services delivery systems.

Furthermore, various program communication and social marketing techniques will be applied to disseminate messages and information, and encourage the adoption of healthy behaviors. Technical support will be ensured through expertise available at the local Resident Office of the Johns Hopkins University/Center for Communication Programs, the Haitian Institute for Community Health (INHSAC), and other private and public institutions. PAHO, in collaboration with other like-minded organizations such as UNICEF, will identify and mobilize potential channels for program communication, including food distribution systems, traditional health care providers (e.g., traditional birth attendants), religious leaders, teachers, women's clubs/organizations, etc.

4.3 RESEARCH

A recent nutrition situation analysis identified various areas of research needs (PAHO/WHO, 1994). Apart from anthropometric data, most information is either outdated, or non-existent. There are paramount nutrition-relevant research needs:

- *Prevalence of micronutrient deficiencies:* The information on vitamin A deficiency dates back to 1975, is limited to eye symptoms, and does not include seasonal influences. The most recent information on anemia stems from a national study in 1978. Similarly, data on iodine deficiency includes national data on goiter prevalence from 1978, and on goiter prevalence and urinary iodine excretion in one Department from 1990.
- *Vitamin A dietary intake and its determinants:* Vitamin A rich fruits are widely available and consumed by the whole population including children. However, seasonal variation is considerable, and, due to the ecological variation, may vary from region to region. Information is necessary for appropriate planning of program issues including supplementation of high-dose vitamin A capsules, vitamin A education, and food production and processing techniques.
- *Infant and child feeding practices:* The only comprehensive KAP (knowledge, attitude, and practice) study on infant and child nutrition was conducted in 1982 in one locality near Port-au-Prince. This study has provided essential information for nutrition-relevant IEC activities. However, more up to date information is needed to evaluate changes over time as well as identify geographical differences.

- *Profile identification of mothers with malnourished children:* Hardly any information exists on the characteristics of mothers that have malnourished children. Such information can be quickly obtained through community based health service delivery systems. The information will be very helpful for targeting, as well as identifying risk factors for child growth and development.

- *Maternal time expenditure and child growth:* Information is urgently needed on maternal time expenditure and its determinants for policy and program planning referring to the complex mechanism of maternal involvement in remunerative activities, maternal absence, inadequate child care practices, and child malnutrition.

There is an urgent need to strengthen local capacity for research, particularly in the area of rapid assessments. For local capacity building, PAHO will support the training of relevant counterparts. In addition, international consultants, who will be invited for research assistance, will work with counterparts in order to develop and improve their skills in (and expand their experiences with) different research methods and principles.

Given the logistical characteristics of the country, PAHO will maintain a stock of motorbikes to support research and evaluation activities in the field.

4.4 SALT IODIZATION

The strategy aims at setting up a salt iodization system. However, Haiti's salt market is characterized by a few big and many small producers, no processing, no state intervention, many traders and numerous transport routes including road and sea transport (however, a major part of the salt passes through Port-au-Prince). In addition, law enforcement for universal salt iodization is not to be anticipated in the very near future. Therefore, a market study, which will provide essential information on the production and marketing of (iodized) salt, is currently being planned. Based on the study results, the most effective way of salt iodization will be planned. This salt will also be used for supplementing target groups (e.g., iodized salt distribution to pregnant women in high risk areas). In the short-term, a targeted supplementation program with iodized oil capsules will be set up.

4.5 EQUIPMENT AND SUPPLIES

Nutritional supplements such as vitamin A, iron and iodized oil, are supplied by UNICEF. PAHO/WHO supplies anthropometric equipment for institutional as well as field use. Furthermore, robust equipment for the

detection of anemia will be provided to selected organizations for (i) the enhancement of prenatal care and (ii) obtaining relevant information on anemia in specific population groups.

5. PROJECTS AND BUDGET	US\$
Training	200,000
Curriculum and material development	
Training of trainers	
Training of health agents and other extension workers	
IEC	500,000
Formative research	
Workshops and seminars	
Material development	
Dissemination	
Research	400,000
Micronutrient prevalence study	
KAP studies on infant and child feeding	
Vitamin A consumption studies	
Profile identification of mothers	
Maternal time expenditure study	
Equipemnt/supplies	500,000
Anthropometric equipment	
Hemoglobin meters	
Monitoring/evaluation	220,000
Nutritional surveillance	
Rapid assessments	
Management information systems	
Supervision	
Logistics	30,000
Motorbikes	
Household food security	150,000
Poverty lending	
Skills development (including food production)	
TOTAL	2,000,000

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