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GETTING OUT THE MESSAGE:

A REVIEW OF COMMUNICATIONS STRATEGIES FOR PROMOTING VITAMIN A INTERVENTIONS

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LIST OF ACRONYMS

AED	Academy for Educational Development
A.I.D.	Agency for International Development
ARI	Acute Respiratory Infections
AVRDC	Asian Vegetable Research and Development Center
BRAC	Bangladesh Rural Advancement Committee
BHW	Barangay Health Worker
CDD	Control of Diarrheal Disease
CHV	Community Health Volunteer
CNC	Community Nutrition Center
CNW	Community Nutrition Worker
DIP	Detailed Implementation Plan
EPI	Expanded Program in Immunization
FAO	Food and Agriculture Organization
FVA	Bureau for Food and Voluntary Assistance
GLV	Green Leafy Vegetables
GOI	Government of India
HIS	Health Information Service
HKI	Helen Keller International
HPN	Health, Population, and Nutrition
ICDS	Integrated Child Development Services
ICEPO	International Center for Epidemiological & Preventive Ophthalmology
IEF	International Eye Foundation
INFP	International Nutrition Planners Forum
INP	Iringa Nutrition Project
ISWR	Institute of Social Welfare Research
IVACG	International Vitamin A Consultative Group
JNSP	Joint Nutrition Surveillance Program
KAP	Knowledge, Attitude, and Practice
MCH	Maternal and Child Health
MCHP	Macina Child Health Project
MIS	Management Information System
MOH	Ministry of Health

MNBP	Media Nutritional Blindness Prevention Program
NGO	Nongovernmental Organization
OIH	Office of International Health
OPG	Operational Program Grant
ORS	Oral Rehydration Salts
ORT	Oral Rehydration Therapy
PAHO	Pan-American Health Organization
PATH	Program for Appropriate Technology for Health
PHC	Primary Health Care
PVO	Private Voluntary Organization
RCSB	Royal Commonwealth Society for the Blind
RDA	Recommended Daily Allowance
RDR	Relative Dose Response
SCF	Save The Children Foundation
ST/N	Office of Nutrition, Bureau for Science and Technology
TFNC	Tanzania Food and Nutrition Center
UNICEF	United Nations International Children's Emergency Fund
USAID	United States Agency for International Development
VAC	Vitamin A Capsule
VHP	Village Health Promoter
VITAL	Vitamin A Field Support Project
VITAP	Vitamin A Technical Assistance Program, HKI
WV	World Vision
YF	Yellow Fruit
YV	Yellow Vegetable
WHO	World Health Organization

PREFACE

This assessment of 29 nutrition communication interventions was carried out in response to a recommendation of the "Evaluation of the Vitamin A Deficiency Project" (April 1988) for the Office of Nutrition, Bureau of Science and Technology, U.S. Agency for International Development (A.I.D.). Specifically, the evaluation recommended that "Methodology and country experience in this intervention approach will need to be evaluated over time to assure the value of replication and/or expenditure of additional substantial funds."

A specific requirement of the Vitamin A Field Support Component (VITAL) of the Vitamin A for Health Project was an assessment of A.I.D.'s social marketing and nutrition communications efforts to date. The purpose of the assessment was to look at the universe of experience in vitamin A nutrition communications and, based on a review of that experience, to draw together the lessons learned, to highlight what has been accomplished, and to give direction to A.I.D. and VITAL for future vitamin A nutrition communications efforts.

The assessment was conducted between March and October 1990 by the Program for Appropriate Technology for Health (PATH), a VITAL sub-contractor. The research, site visits, and data analysis were conducted by Ms. Judi Aubel, a PATH Consultant. The Terms of Reference and Scope of Work for the assessment are attached as Appendix A but were modified during the course of the assessment activity. The methodology for carrying out the assessment involved a review of existing literature on nutrition education and social marketing, collection and review of all documentation on vitamin A nutrition communications projects, and visits to several project sites. Specifically, the assessment was organized around the following tasks:

- Identification of all current and post-1975 A.I.D.-funded vitamin A social marketing, nutrition education, and communications efforts (Offices of Health and Nutrition, FVA/PVC, USAID Missions, Peace Corps), primarily through information collected by the Academy for Education Development (AED) and the "Inventory of USAID Funded Projects/Grants with a Vitamin A Component" (VITAL, February 1990).

- Identification of all vitamin A social marketing efforts supported by other donors, i.e., the World Bank, the Food and Agriculture Organization, the United Nations Children's Fund, etc.

- Acquisition and review of written reports/documents from the projects identified.

- Development and administration of an interview schedule/questionnaire for each project and the conduct of interviews with U.S.-based project management staff and persons responsible for implementation.

- Visits to six field sites in three countries to assess the nutrition communications efforts. These sites were

Malawi	Vitamin A Project Family and Community Nutrition Promotion Program
Philippines	Nutri-Bus: Comprehensive Delivery of Health and Nutrition Services Through Community Organization Social Marketing of Vitamin A Teacher-Child-Parent Project
Thailand	"Mother Loves Her Child" Social Marketing of Vitamin A-Rich Foods

- Development of a framework for analyzing each project through interviews with project staff or through a review of the available documentation. This analysis included an assessment of the appropriateness of the project design (i.e. the validity of assumptions guiding project design and whether goals and objectives are specified, realistic, measurable, and relevant to the stated problem); project implementation (i.e. baseline data collected, conduct of formative research, implementation of activities related to project objectives, formative research results applied to project implementation, changes in implementation based on experience); project outcomes (i.e. changes in knowledge, attitudes, and practices [KAP] and increased vitamin A coverage, any unexpected results, sustainability, replicability); project costs (i.e. in-country and total project cost and relative allocations of project components); and the extent to which the social marketing, communications, and nutrition education concepts and methodology have been successfully transferred to host country staff.

- Preparation of a report of the assessment findings, including a list of vitamin A social marketing, communications, or nutrition education projects funded by A.I.D. or other donors; a synthesis of the strengths and weaknesses in program methodology, implementation, and outcome; a compilation and analysis of the lessons learned from projects to date; recommendations for A.I.D. for future vitamin A projects; and identification of issues deserving further investigation.

Meetings were held with representatives of the Manoff Group, AED, A.I.D. and Helen Keller International (HKI) at the outset of the assessment and following the completion of the site visits to discuss the assessment's methodology and findings. Project summaries for all 29 projects reviewed were sent to project managers for updating and reviewing for accuracy.

Several difficulties in conducting this assessment must be noted. Project documentation was often difficult to acquire or did not exist. Many project staff members did not find time to document the decision-making processes in program planning or implementation. Thus, the answers to many important questions could not be obtained. Further, the available reports

tended to document the final implementation method rather than the process by which the method evolved. In addition, because of the diversity of project strategies, objectives, target populations, and settings and because few projects conducted outcome evaluations, it was extremely difficult to compare the 29 projects reviewed for this assessment. Many of the project documents did not contain information that would allow assessment of the elements identified in the assessment framework, especially with regard to outcome objectives and project costs.

The site visits were particularly valuable and yielded more in-depth information than could be obtained through a review of documents as reflected in project summaries. In fact the assessment's findings rely heavily on the first-hand information obtained during the site visits to the six projects.

VITAL would like to thank the organizations that participated in this assessment effort, especially those that so graciously shared their experiences during the site visits.

SECTION ONE
BACKGROUND

I.1 The Complexity of Behavior Change and Influence of Context in Vitamin A Interventions

The ultimate goal of all public health programs is to improve the health and nutritional status of communities. Central to achieving that goal is an understanding of both the complexity of the behavior changes associated with the adoption of health innovations and the context within which those changes must occur. In the case of vitamin A capsule (VAC) distribution or vaccination administration, for example, the behavior change required on the part of mothers is relatively simple in terms of the resources required to carry out the behavior, the frequency with which the behavior must be performed, and the skill required of the mother. On the other hand, changing nutrition practices (for example, increasing consumption of green leafy vegetables) is considered one of the most challenging aspects of behavior change.

A major difficulty underlying the promotion of change in nutrition practices is that, in general, people are much less motivated to engage in preventive or promotive behaviors than in curative ones. Because problems associated with maternal and child nutrition are often subtle or imperceptible, individuals frequently fail to acknowledge the need to modify their nutrition practices. In most instances, the risk of blindness caused by vitamin A deficiency does not present imminent danger. As a result, individuals do not perceive preventive interventions as urgent.

Reluctance to change nutrition practices can also be traced to the incremental pace of improved health status and the lag time between the adoption of a healthful practice and any noticeable improvement in health status. Further, caretakers often do not receive clear and timely feedback on the effectiveness of changes they may be making. Finally, getting someone to sustain a new behavior has been shown to be more difficult than getting an individual to engage in that behavior for the first time.[1]

Complex and ingrained sociocultural and environmental realities play an important role in fostering or impeding the adoption of sound nutrition practices. Social constraints could include lack of support by fathers or community leaders for VAC distribution or the scheduling of distribution sessions in the morning when women are often exceedingly busy. Economic constraints can include insufficient resources for purchasing or producing food; difficult geographic and/or limited, seasonal access to appropriate foods; and increased time required for obtaining, processing, preparing, and storing vitamin A-rich foods.

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[1] Ganz, 1981.

It is clear that nutrition behavior is related to a decision-making chain that involves food purchase, gathering, or production; preparation; intrafamilial distribution; and consumption. All the steps in the decision-making chain influence infant and maternal feeding practices and need to be addressed in programs that aim to increase the consumption of vitamin A-rich foods. In particular, the degree to which education interventions can contribute to improved nutritional status is severely limited by sociocultural and environmental realities. These realities should be considered in any program that attempts to increase consumption of vitamin A-rich foods.

Moreover, vitamin A programs geared specifically to the individual neglect the broad and complex environmental factors that can significantly influence that individual's behavior.[2] Recent experience in the field suggests that the most successful vitamin A intervention programs should be structured around community-organizing strategies that involve local political, administrative, traditional, and religious leaders in both analyzing problems and identifying solutions for which communities themselves can take primary responsibility. Community-identified solutions may help modify community norms and, at the same time, influence individual behavior. Similarly, field results indicate that intervention programs should incorporate strategies targeted to the appropriate community decision makers to help improve the institutional understanding of community needs and constraints and to increase the institutional commitment to responding to those needs with appropriate resources and services.

It is important for program planners to recognize that increasing household consumption of vitamin A-rich foods is a multifaceted process: the behaviors associated with obtaining and preparing vitamin A-rich foods and ensuring that children consume such foods will need to be performed frequently; new skills related to food production and preparation may have to be acquired; and collective as well as individual decision making in favor of the change will be required.[3]

I.1.1 Women and Nutrition-Related Activities in Developing Societies

In most developing societies, women assume major responsibility for meeting the nutrition needs of the household. They are often responsible for food production or purchase, food processing and preparation, and the feeding of young children. However, providing for household nutrition needs is but one of women's multiple tasks that also include economic production, household management, and child care. It is not surprising, then, that women in developing societies often do not command sufficient resources--time, energy, and money--to ensure the nutritional well-being of household members. As a result, they are frequently accused of not being sufficiently motivated to ensure the welfare of their families--despite

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[2] Crawford, 1977.

[3] Yarbrough, 1986.

appeals to adopt beneficial health practices.

In programs that promote increased consumption of vitamin A-rich foods, program planners must consider program strategies that require smaller expenditures of women's scarce resources and factor those strategies into program design. In addition, program planners must devise ways to increase women's access to the resources needed to engage in improved nutrition practices. Further, at the outset of programs and during their implementation, program planners should engage in ongoing dialogue with women regarding the suitability of both proposed nutrition practices and program strategies. Based on the resulting suggestions and priorities, planners may need to modify proposals and strategies to help ensure adoption of healthful nutrition behaviors.

I.2 Communications Strategies and the Target Group

The success of vitamin A interventions is linked to the application of appropriate communications strategies. Critical to a discussion of communications strategies is an understanding of the communications process. There are two contrasting models of communications: the one-way transfer and two-way transfer of information. The first model defines communications as a one-way process that informs and persuades the client to accept a new idea or individual practice. To date, most health and nutrition programs have relied on the one-way transfer of information from the health provider or "source" to the client or "receiver."

The second model is a two-way and cyclical process in which participants share information with one another to reach a mutual understanding and to identify collective action to be taken to solve common problems. While its fundamental element is information, the model refers to "participants" in an information-sharing process and discards the terms "source" and "receiver." In addition, the model highlights "communications networks" wherein interconnected individuals are linked by patterned flows of information and influence.

Relative Impact of Mass and Interpersonal Communications

Both mass and interpersonal communications activities deliver persuasive messages to attentive audiences (one-way communications) or stimulate participants to consider alternative practices, evaluate their own priorities and resources, and become actively involved in deciding how new ideas can be adopted or modified (two-way communications). However, the characteristics of the mass media and interpersonal communications processes differ. Mass media communication relies on the use of such media as radio, television, newspapers, or posters to reach a large audience rapidly. Interpersonal communication, on the other hand, relies on the face-to-face exchange of information and personalized feelings. Interpersonal communication is not, however, synonymous with two-way communications. In fact, interpersonal communication often consists of a monologue--a one-way transfer of information.

The extent to which mass communications and interpersonal communications can influence health behavior is a topic that continues to be debated and researched. Further, the relationship between communications activities in general and health- or nutrition-related behavior change in particular is complex, and present understanding of this relationship is imperfect. The communications literature does, however, recognize that adoption of a new practice or product is a multistep process. Individuals do not automatically go from hearing about an innovation to adopting it. Instead, they tend to progress through a discernible sequence in the process of adopting or rejecting an innovation. The steps that an individual must pass through include the following:

- awareness of the innovation;
- knowledge of the innovation;
- evaluation of the innovation in terms of its advantages and disadvantages to the individual;
- decision to try or not to try the innovation; and
- decision to continue or discontinue use of the innovation.[4]

Field experience suggests that either mass or interpersonal channels can be effective in initially informing an individual about an innovation. In most cases, though, interpersonal communications is necessary to allow individuals to evaluate an innovation at the personal level and to receive feedback and encouragement concerning a trial of the innovation. Interpersonal communications influences the decision about continuation, while mass media can play a powerful role in reinforcing a new behavior.[5]

Considerations in Designing Communications Strategies

The choice of which communications channels to use in promoting individual or group behavior change is a critical one. Sometimes the complexity of bringing about changes in nutrition practices is underestimated, and at other times the potential effect of mass communications on behavior change is overestimated. Another tendency is to assume that the greater the variety of channels and activities used, the stronger the likelihood that sustained behavior changes will result. Experience suggests that this is not necessarily the case.

Program planners should take note of the target group's access to and use of different communications channels. For example, even though target group mothers enjoy access to a certain mode of communications, they might not attend to it. Therefore, a given communications channel may not necessarily be appropriate for educating a particular target group about vitamin A consumption. Further, certain groups may have less access to mass communications than do other groups. Some people may live beyond the range of radio and

[4] Rogers, "Stages in the Innovation-Decision Process," 1983.

[5] Rogers, 1983.

television broadcasts or may receive broadcasts in a language they do not understand. In still other instances, people who have grown insensitive to government-produced radio broadcasts may simply ignore any nutrition messages transmitted by radio. Finally, higher illiteracy rates among women significantly limits the impact of both graphic and written materials.

The influence of social networks on individual behavior and behavior change is increasingly acknowledged as important in the design of communications strategies that support community nutrition programs.[6] Information received from the outside is processed by the network, which, in turn, can play a critical role in interpreting new, incoming information and influencing how individual network members respond to that information. Where individuals have strong affiliations with their social group, as is often the case in traditional societies, group norms and values are especially powerful. As a result, social networks can discourage individual innovation or deviance.

The characteristics of communicators or "change agents" have also been shown to have an effect on the people with whom the change agents interact. Change agents appear to have greater influence when they share similar characteristics with members of the target audience. They also work through opinion leaders to help individuals evaluate a proposed innovation rather than merely encouraging its acceptance and demonstrating its application for the individual. A well-trained "expert" is not necessarily the person who can most successfully influence community thought and behavior; people from the community itself can often be the most effective change agents.

Recent research suggests that communications--whether mass media or interpersonal--probably needs to be sustained to bring about and maintain change in nutrition practices, although the necessary duration of the communications is still under discussion. Generally, though, frequent communications through either mass or interpersonal communications channels appears to have greater impact than infrequent communications.

I.3 Programmatic Approaches to Promoting Improved Health and Nutrition

The 29 projects reviewed for this assessment generally adopted one of two programmatic techniques to encourage vitamin A-related behavior change: social marketing or nonformal nutrition education. These terms have been defined in somewhat different ways by different researchers but, in practice, tend to rely on one of the two communications models already discussed. Consequently, the following overviews cannot possibly encompass the multitude of ways in which the intervention programs have applied the social marketing and nonformal nutrition education approaches to program design and implementation; rather, the intent here is to summarize the major features of each approach as well as the communications strategies used in program development.

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[6] B.A. Israel and K.A. Rounds, 1987.

Social Marketing

Social marketing applies the principles of commercial marketing and advertising to both the analysis of social problems and the development of strategies for disseminating messages and materials that promote beneficial practices and products. The approach stresses community data collection and concept testing in advance of program planning as a means of structuring program content around community beliefs and practices. Specifically, the collection of in-depth qualitative data through such techniques as focus groups can aid program planners in understanding the norms and attitudes underlying nutrition practices. Most social marketing projects reviewed for this assessment emphasized the systematic development and diffusion of one-way motivational and promotional messages directed to various target audiences. While social marketing prescribes the use of both mass and interpersonal communications, the projects considered here tended to focus most of their limited resources on mass communications efforts to the exclusion of interpersonal communications.

The social marketing approach may overestimate the ability of persuasive and concise messages used alone to bring about complex health- and nutrition-related behavior changes. Short and attractive messages are useful but probably not sufficient to encourage mothers to overcome traditional resistance points to change. Because social marketing programs have often focused on the one-way dissemination of motivating messages, they may have failed to provide opportunities for members of the target audience to weigh the advantages and disadvantages of the new ideas and for program planners to modify the messages to suit individual needs. "The strength of a radio, newspaper or television campaign lies in its ability to create a desire for a service or product, rather than in its ability to educate. Mass media campaigns, if used in conjunction with and in support of one-on-one interactions with mothers or caretakers, are effective in changing family health behavior. However, field experience has shown that community-level interventions are more effective than mass media alone."[7]

Nonformal Nutrition Education

The nonformal nutrition education approach engages the individual as "learner" in the active, cognitive processing of information that occurs through dialogue and interaction with others. The nonformal approach permits the two-way transfer of information to continue well after the initial development and diffusion of the message have been completed. For nutrition education to have a lasting effect on an individual's behavior, it must take advantage of the several communications channels that already characterize the flow of information in a given community. For example, innovative programs structured around the nonformal approach have targeted community leaders and others who influence cultural practices to assume responsibility for conveying nutrition messages, encouraging the trial of a new behavior, reinforcing that behavior, and sharing perceptions about a given nutrition practice.

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[7] Storms and Quinley, 1988, p.6.

Community Participation and Institutional Development Strategies

The success of the social marketing and nonformal nutrition education approaches is often dependent on the extent to which community participation and institutional development strategies are incorporated into vitamin A intervention programs. Community participation and institutional development strategies should not be considered mutually exclusive. They can, in fact, work in support of one another and enhance a community's as well as an individual's overall likelihood of adopting a desirable, healthful practice.

Community participation affords individuals an active rather than passive decision-making role and thereby provides community members with an opportunity to "buy into" and "assume ownership" of practices that can improve their nutritional status. Community participation engages individuals in an ongoing learning process and empowers a community to define and solve its problems. Stated succinctly, community participation is "...the process by which the community becomes actively involved in all aspects of the planning, implementation, and evaluation of the actions it takes to resolve its problems."[8]

Successful implementation of nutrition programs suggests that public institutions (from the national level to the local level) should be involved in the analysis of food and nutrition problems, the development of comprehensive strategies to address those problems, and the allocation of resources for implementing the strategies. It is important that institutions commit themselves to engaging in genuine dialogue with communities to understand the communities' self-identified needs, priorities, and constraints. The planning, implementation, and evaluation of programs should be conducted by communities, not imposed on them. Vitamin A programs should promote partnerships between institutions and communities by using two-way communications techniques. Similarly, such programs must develop explicit strategies for encouraging institutions to reorient their policies, resources, and approaches to working with communities. Institutional development strategies can provide a policy and resource allocation framework for involving community members in the identification and resolution of community nutrition issues.

The communications components of vitamin A nutrition programs have rarely demonstrated a commitment to developing the relevant institutions' capacity to initiate change. In fact, program planners have too often relied simply on collaboration with public and private sector institutions as a strategy for developing the institutional capacity to analyze problems and provide the necessary response. It is clear that institutions must redirect their approach from mobilizing communities in support of institutionally developed programs to encouraging communities to develop and implement their own initiatives. The International Nutrition Planners Forum (INPF) concluded that increased institutional commitment to addressing food and nutrition needs should be a development priority and that such commitment is essential to achieving sustained behavior change. Institutional development strategies require a judicious

[8] Paul, 1987.

combination of top-down and bottom-up planning and, in many cases, the reorientation of institutional priorities and focus.

SECTION TWO
COMPONENTS OF VITAMIN A COMMUNICATIONS PROJECTS: AN ASSESSMENT

This assessment has identified 11 common components of vitamin A communications programs, each of which plays a role in the improving the vitamin A nutritional status of a given community. The 29 projects were analyzed in terms of these components to identify the lessons learned and to make recommendations to A.I.D. and the VITAL for future efforts aimed at promoting improved vitamin A status.

Complete information was not available from each of the 29 projects for all 11 program components. However, for each component, examples from the projects are cited to illustrate alternative approaches to program design. It should be noted that the examples are not meant to be exhaustive but rather illustrative. More detailed information on each of the projects is presented in the project profiles in Appendix B.

II.1 Program Planning Process

An important factor related to the effectiveness of nutrition communications programs is the overall approach used to develop such programs. The review of the 29 projects revealed two distinct approaches to planning nutrition communications programs: the "blueprint" approach and the "learning process" approach.[9]

In the classic blueprint approach, technical experts at the national or regional level prepare detailed program designs at program inception and solicit limited input from field staff and communities. They then implement activities as defined in the plan. Monitoring consists of evaluating the extent to which the planned activities are implemented. By contrast, the learning process approach is "an adaptive, bottom-up process of program and organizational development through which an adequate fit may be achieved between beneficiary needs, program outputs, and organizational competence."[10] The program design and capability to implement it are developed in consultation with community beneficiaries and program implementors and thereby take into account the concerns and priorities of each group.

The learning process approach would appear to be more appropriate than the blueprint approach for community nutrition communications program planning, but important

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[9] Korten, 1980.

[10] Korten, 1980, p.502.

constraints limit its application. Specifically, it requires the development of mechanisms for ongoing dialogue between different levels of society to facilitate a combination of bottom-up and top-down planning.

Projects Reviewed

Most of the 29 projects were developed and implemented in accordance with the blueprint approach. In these projects, the project team developed objectives and corresponding strategies at program outset and carried out the relevant activities as initially defined during the implementation phase. Two significant exceptions were the Mahidol University project in Thailand and the Iringa project in Tanzania.

The Mahidol University project in Thailand is an example of a learning process approach to program development and follow-up. The program initiators conceived program development as an iterative process that combined top-down and bottom-up planning. The university team defined the overall orientation of the project but agreed from the outset that periodic dialogue with project collaborators--from the national to local level--would determine project structure and specific activities. The district officer, the senior administrative official in the area where the project was conducted, stated, "The project team did not come with a detailed notion of what they wanted us to do. Rather they came with a concept, and the representatives of the different sectors generated ideas of activities which could be carried out to accomplish the project objectives. Then with the team they evaluated the alternatives and decided together on the activities which seemed most appropriate and feasible." Through sustained and structured dialogue with project collaborators, the project team identified, developed, and carried out new activities as the project proceeded.

The Iringa project in Tanzania used a similar approach. The planning process involved all levels of the administrative and social hierarchy, from the central government to the household and village level, in repeated cycles of assessment, analysis, and action. Lessons learned during each "Triple-A cycle" were integrated into the project design. The final project evaluation identified the program planning process itself as one of the principal elements that contributed to the project's success.[11]

In the Thailand and Tanzania projects, the participatory nature of the planning process appears to have contributed to a sense of ownership of and commitment to the project activities at many levels of society. The success of these two projects indicates that the learning process approach might be useful for other vitamin A communications programs.

[11] UNICEF, 1989.

II.2 Preliminary Program Research

It is assumed that, prior to the development of a vitamin A communications program, vitamin A deficiency has already been identified as a problem through a prevalence assessment. Prevalence studies, therefore, are not considered part of the communications program development process. Instead, two types of preliminary research should be carried out in any nutrition communications programs: formative research and baseline research. The purpose and method of data collection for these two types of research are different and are discussed separately. Formative research helps define the program's education strategy and message content. Baseline research collects data on nutrition practices and knowledge before the initiation of program activities for comparison with data collected at the end of the program and provides the basis for evaluating program effectiveness.

II.2.1 Formative Research

Many past nutrition education programs failed to collect initial data on nutrition-related beliefs, practices, and resources at the community level. Attempting to change nutrition practices is an extremely complex process: social, cultural, and economic factors related to nutrition must be understood if appropriate nutrition education programs are to be developed. A growing consensus suggests that program planning should be preceded by the collection of in-depth data from the target communities.

Projects Reviewed

Overall, the formative data collection efforts were deficient in the 29 projects. Most programs did not gather the necessary data before developing their education strategies. Where in-depth formative data were collected, the scope and data collection methods varied and included focus group interviews, KAP studies, and in-depth interviews. Some projects carried out initial quantitative KAP surveys and reported that the data informed the development of the educational strategies. However, quantitative KAP survey data alone are not considered an adequate basis for developing education interventions because these data are self-reported and therefore not entirely reliable.

The projects that followed a social marketing model carried out initial qualitative community data collection by relying primarily on focus group interviews (Helen Keller International, Inc. [HKI]/Philippines; HKI/Bangladesh; Thailand; Rovita/Indonesia). In these projects, the data collection efforts focused on assessing cultural beliefs, attitudes, and practices of individuals, and were generally conducted thoroughly. Most projects, however, devoted considerably less attention to the broader social and economic aspects of the environment. For example, projects typically collected little or no data on the dynamics of caretaker-child interaction during feeding or on indigenous formal and informal communications channels. Similarly, the economic aspects of household and community nutrition systems received little emphasis. Such information may be very important in developing successful nutrition communications programs.

II.2.2 Baseline Research

Initial baseline data collection is essential as a benchmark for later program evaluation. For VAC distribution program components, baseline data should include VAC coverage rates before initiation of program interventions. For programs that promote the consumption of vitamin A-rich foods, baseline data collection should include dietary recall interviews and probably a KAP survey to quantify the knowledge and attitudes of the target group relative to vitamin A. But a KAP survey alone is not sufficient, therefore, additional assessment methods--both qualitative and quantitative--should be used to validate the findings of the KAP survey. For VAC distribution and vitamin A consumption program components, biochemical and clinical assessments are not necessary. Baseline data for projects with gardening components should include numbers of vegetable gardens, types and quantity of vitamin A-rich foods grown, and the use of foods grown.

Projects Reviewed

In general, the baseline data collection efforts were deficient in the projects reviewed. Some projects failed to collect any baseline data (HKI/Bangladesh; Tanzania Food and Nutrition Center [TFNC]/Tanzania); others carried out only biochemical or clinical assessments (Brazil, Guatemala). These latter assessments require a considerable expenditure of funds as well as a high level of expertise. Some projects conducted KAP surveys only (Hyderabad, India; Integrated Child Development Service [ICDS],India; Mauritania; Nepal). KAP surveys alone are believed to be insufficient because the data are self-reported and thus unreliable. A few projects that promoted increased consumption of vitamin A-rich foods carried out 24-hour dietary recall assessments (HKI/Indonesia; Thailand, HKI/Philippines) and conducted baseline KAP surveys. According to Underwood (1990), in projects that attempt to improve consumption of vitamin A-rich foods, a measure of frequency and portion size of dietary intake are sufficient for baseline assessment.

II.2.3 Responsibility for Pre-Program Research

The locus of responsibility for formative and baseline pre-program research is an important issue that is often overlooked in project planning. Increasingly, funding sources are requiring pre-program data collection: as a result, vast amounts of data are often generated. It is not always clear however, that program managers use the data in program planning and management. An appropriate mix of local project staff and outside consultants should participate in the research design and data collection efforts, to assure that appropriate data is collected and used in program design and implementation.

Projects Reviewed

In the projects reviewed, an external social science research institute, consulting firm, or advertising or social marketing firm usually performed the preliminary data collection. It is difficult to determine the extent to which project and ministry collaborators were involved in

the pre-program research process, but it appears that, in many cases, program collaborators participated only minimally (HKI/Bangladesh; Rovita/Indonesia). Where the responsibility for conducting either baseline or monitoring studies was assumed by an outside agency, the collected data did not always correspond to program planners' concerns. Similarly, it is not clear that program planners and implementors took full advantage of the findings. In a few cases, ministry and program staff assumed major responsibility for conducting the research, often with the assistance of social scientists or marketing specialists (HKI/Philippines).

Ideally, vitamin A program managers and field staff should be involved as much as possible in both the formative and baseline research efforts. Their participation can strengthen both their understanding of the relationship between data collection and program planning and their knowledge of data collection processes. The extent to which such involvement is possible varies from project to project.

II.3 Target Groups/Levels of Intervention

The identification of groups targeted for program interventions is related to the definition of program goals and objectives. In public health nutrition programs, activities are usually targeted to those groups at greatest risk of malnutrition. While the long-term goal of vitamin A nutrition programs is to improve the health and nutritional status of women and children, it does not necessarily follow that program activities should target these groups exclusively. It is believed important to target as well groups that influence women's behavior or the resources to which they have access.

Projects Reviewed

In most of the vitamin A projects reviewed, the target groups comprised individual mothers and children. A few programs also targeted family members and formal and informal social networks such as men, grandmothers, or women's friendship networks. Programs with an explicit community development orientation identified community organizations and formal community leaders as target groups (International Eye Foundation [IEF]/Malawi; Thailand; Iringa/Tanzania; Save the Children Federation [SCF]/Malawi). In a few of these community-based projects, informal women leaders were identified as target groups and were trained to communicate, in turn, with women's friendship networks (SCF/Malawi; Tamil Nadu, India).

Few programs identify social institutions as targets for program interventions although some of the social marketing programs target health ministry collaborators as target groups for the transfer of skills in social marketing methods. The Mahidol University/Thailand, Iringa/Tanzania, and Nutri-Bus/Philippines projects all targeted health and other social institutions at different levels of society and attempted to increase the institutions' awareness of nutrition problems, to involve the institutions in the development of program interventions, and to increase the institutions' allocation of resources for those interventions.

II.4 Community Participation

The importance of community participation in the development and implementation of community health and nutrition programs has already been discussed. In health and nutrition programs, the expectations of program designers and managers for community participation are reflected in the structure of the programs they develop. Those expectations are translated into levels of participation characterized by the following typology: information receiving; consultation with beneficiaries; decision making; and initiating action.[12]

Projects Reviewed

In most of the 29 projects, community participation was limited to information receiving or consultation. Only in a few cases were communities involved in decision making and, in one case a community was involved in initiating action. In virtually all of the projects, communities participated to the extent that they received nutrition information. Based on the specific information conveyed to the target groups, program planners expected communities to follow such recommended actions as "attending VAC distribution sessions" or "giving more vitamin A-rich foods to their children." These actions reflect the lowest level of participation.

In some of the projects, communities participated during the formative data collection phase as interviewees and provided project personnel with information on their beliefs, practices, etc. In other words, they consulted with project staff by offering their responses to proposed project activities (HKI/Philippines; HKI/Bangladesh; Mahidol University/Thailand; Rovita/Indonesia). In projects that applied the social marketing approach, some community members participated as interviewees during the formative research and message development phases. Similarly, during the implementation phase of the communications activities, community members participated as interviewees in monitoring exercises and provide feedback to program managers on the success of the implementation efforts. This consultative type of community participation in project development and monitoring can make an important contribution to the design of programs that take into account community perspectives and constraints.

A small number of projects--all based on a community development philosophy--elicited community participation in decision making (CARE/Mali; Karnataka, India; IEE/Malawi; Dharavi, India; Nutri-Bus/Philippines). In these projects, community groups and leaders were actively involved in deciding how to carry out community-level activities as well as in managing and monitoring those activities.

In only one of the projects, the Iringa project in Tanzania, was it clear that community leaders and groups were involved in initiating actions on their own, the highest level of participation. A primary goal of this project was to train community groups to analyze their own problems,

[12] Paul, 1988.

to weigh alternatives, and to implement solutions. Emphasis on this level of participation is consistent with the project's focus on developing community self-reliance and empowerment.

II.5 Institutional Development

Public institutions' commitment to solving community food and nutrition problems is a necessary element for the long-term success of community nutrition programs. Such commitment implies institutional involvement in the analysis of food and nutrition problems, in the formulation of comprehensive food and nutrition strategies within overall development schemes, and in the allocation of resources for the implementation of such strategies.

Projects Reviewed

Most social marketing programs reviewed for this assessment emphasized the systematic development and diffusion of motivational and promotional messages to the target audiences rather than the formulation of institutional and community development strategies. In other words, social marketing programs usually have not incorporated the labor-intensive community development approaches that are characterized by community involvement in problem-solving, planning, and implementation of health/nutrition-related activities. Despite efforts to collaborate with community institutions, social marketers have largely tended to focus on encouraging institutional participation in the development and dissemination of methods and materials. Efforts to promote sustained institutional change have been limited, and strategies directed to encouraging such change often revert to the one-way model of information transfer.

Few of the projects devoted serious attention to increasing institutional commitment through the application of clearly defined organizational development strategies. Three projects did, however, work with existing institutions to encourage their analysis of food and nutrition problems, as well as their assessment of alternative solutions. In the Iringa project in Tanzania, one of the project objectives was "to improve the capabilities at all levels of society (institutional and community) to assess and to analyze nutrition problems and to design appropriate actions."[13] The project emphasized the strengthening of "processes" for the analysis and solution of problems and reinforced the institutional mechanism for planning, implementing, and monitoring food and nutrition activities. Informal meetings and workshops were important tools in enhancing institutional capabilities.

Mahidol University in Thailand developed a similar project approach to working with multisectoral institutions. Even though the project's organizational development strategy was not clearly defined in the initial project documents, the development strategy became a key element of the project's overall strategy. In fact, discussions with project initiators and implementors revealed a commitment throughout the project to work with institutions to

[13] UNICEF, 1988.

involve them in substantive programmatic decisions, to incorporate their proposals for program activities, and to strengthen their ability to implement and monitor activities on their own.

The Nutri-Bus Project in the Philippines explicitly attempted to catalyze dialogue with both public and private institutions from the regional to local levels as a means of increasing the institutions' commitment to addressing nutrition and health problems. In addition, program managers created mechanisms for structuring periodic dialogue with institutions and for ensuring follow-up with institutional partners.

Several projects that applied a social marketing approach--most notably the HKI project in the Philippines and the Rovita project in Indonesia--made concerted efforts to develop the capabilities of institutions to use the social marketing methodology. These projects developed the skills of Ministry of Health (MOH) collaborators in conducting preliminary community research, developing and pretesting materials, and monitoring communications campaigns. These are important examples of institution strengthening, though they illustrate a much more limited approach to institutional development than the previously mentioned projects that involved more comprehensive attempts to reorient institutional priorities and the allocation of resources.

II.6 Traditional and Modern Forms of Communications

A fundamental consideration in the development of any vitamin A strategy is the choice of the communications forms to be used. Communications can be categorized into either traditional (or indigenous) forms or modern forms.

Traditional forms of communications consist of both formal and informal modes. Formal modes of traditional communications include community meetings, religious gatherings, popular theater, story telling, and town criers. Informal modes of communications, also referred to as indigenous forms of "social exchange," include contacts within social networks; contacts between individuals or groups and both formal and informal leaders; and social exchange during such gatherings as weddings, baptisms, celebrations, and market days. Most of the traditional forms consist of interpersonal communications with individuals or groups.

Modern forms of communications that are potentially useful in health and nutrition programs include both mass and interpersonal communications activities. Frequently used mass communications channels include the broadcast media (radio, television, and video) and the graphic and print media (posters, flip charts, flyers, newspapers, and billboards). Other less sophisticated or "lightweight" media and materials include community radio, taped stories or dramas, puppets, card and board games, felt boards, and coloring books. In categorizing communications into traditional and modern forms, interpersonal communications between technicians employed in public institutions and community clients can be considered modern.

There are several important contrasts between traditional and modern forms of communications. Traditional forms of communications are either locally produced or occur spontaneously, as with informal indigenous communications, and are adapted to local realities and values. The content of such communications is variable and difficult to control. By contrast, modern forms of communications, and particularly the more sophisticated media, tend to be centrally controlled and thereby permit standardization of message content. Traditional modes of communications can be used relying largely with available local material and human resources. Reliance on the more sophisticated types of modern mass media such as radio, television, and many print materials requires considerable resources, especially in the case of broadcast media. The lightweight media are generally less expensive but require more human resource inputs.

Projects Reviewed

a. VAC Distribution

The projects illustrate different approaches to the task of communication with mothers or other caretakers to encourage them to bring their children for VAC distribution. In some projects, particularly those that tended to adopt a community development philosophy, the communications task relied exclusively on traditional or indigenous channels of communications (IEF/Malawi; Brazil; ICDS/India). These projects mobilized local leaders and mothers by organizing meetings in which program planners explained the objectives of the objectives of the intervention, answered questions, and elicited support of the leaders in informing the local population of and, in some cases, assisting in planning for distribution sessions. In other projects, both traditional and modern forms of communications were used for VAC distribution (Tamil Nadu, India; Mauritania). Most of the projects structured around a social marketing methodology (HKI/Indonesia; HKI/Bangladesh; Rovita/Indonesia) relied mainly or exclusively on modern forms of communications to mobilize the community for VAC distribution. In general, these projects used mass media and print (radio, television, newspaper, mailings, billboards, posters, and flyers) and, to a much lesser degree, interpersonal channels (health and nutrition workers) to encourage mothers to participate in VAC distribution sessions.

b. Promotion of Increased Consumption of Vitamin A-Rich Foods

In some projects, efforts to encourage families to feed their children vitamin A-rich foods relied only on traditional forms of communications (CARE/Mali; Karnataka, India) that included educating and then eliciting the support of local community leaders for nutrition education activities; training community volunteer peer-teachers who, in turn, conducted educational sessions and informally counseled other community women (using simple visual materials); community meetings or festivals combining traditional cultural activities and vitamin A activities; community theater; songs developed by the villagers; dances accompanied with songs about health and nutrition; stories and poems; informal discussions and role plays with small groups; and cooking demonstrations and competitions.

Other projects turned to a combination of traditional and modern communications forms. For example, the Mauritanian project used slide shows as well as community theater and songs. The Nutri-Bus project in the Philippines used video in the training of local women leaders, in counseling sessions conducted by community nurses, and home visits. In the project in Thailand, which combined institutional and community development within a social marketing context, village monks were trained and then incorporated nutrition themes into their Friday temple talks; health workers counseled child caretakers; and local radio producers were encouraged to produce their own health/nutrition programs.

The Tamil Nadu project in India combined several communications activities, including films, folk media, cooking demonstrations, wall paintings and other group education activities. The pivotal element in the community-level nutrition activities was the community nutrition worker (CNW). The choice and use of these workers illustrates that a program can work through carefully selected informal social network leaders. By choosing mothers who were poor but who nonetheless had well-nourished children and were willing to share their approaches with other mothers, the project reflected the insights from research on positive maternal deviance.

As with VAC distribution interventions, the social marketing projects relied primarily on modern forms of communications to promote increased consumption of vitamin A-rich foods. They used mass media more than interpersonal communications from health or nutrition workers. In several of these projects, program managers reversed their initial decisions to use certain modes of modern communications, which eventually proved to be ineffective or impractical. This was the case with the use of newspaper advertisements in Bangladesh (HKI) and slides in Mauritania.

c. Increased Production of Vitamin A-Rich Foods

Projects that featured gardening components were structured around traditional forms of communications that depended on informal communications from either community volunteers or agricultural (modern sector) technicians. These projects trained gardening committees, conducted gardening demonstrations with community leaders and groups, and trained and elicited the support of community leaders (SCF/Malawi; Mauritania; CARE/Mali).

II.7 Vitamin A Concepts and Messages

A preliminary step in the development of vitamin A education/communications programs is to identify the specific nutrition concepts and messages to be promoted as part of the educational strategy. A systematic process should guide the assessment of alternative concepts and messages as well as the final selection of the message to be conveyed to the target audience.

a. VAC Distribution Programs

VAC distribution programs should include an education component that teaches families about the importance of periodic vitamin A supplementation and promotes increased consumption of vitamin A-rich foods. The importance of vitamin A supplementation might be best presented in terms of vitamin A's contribution to overall sound health, including good eyesight, rather than in terms of preventing eye diseases and blindness. Experience suggests that it is more effective to motivate people to adopt nutrition practices that produce a positive outcome (good health, good eyesight) than to encourage adoption of a behavior that prevents negative outcomes (night blindness, death).[14]

b. Programs Promoting Increased Consumption of Vitamin A-Rich Foods

In promoting increased consumption of vitamin A-rich foods, a critical element is the determination of which foods to promote. The nutritional value of alternative foods is only one of the factors that should be taken into account. Other important factors for consideration include sociocultural beliefs related to food acceptability (it is generally easier to promote consumption of familiar rather than unfamiliar foods); traditional practices related to food preparation; food accessibility in terms of location, quantity, and seasonal availability; price; and storage conditions.

The process of identifying priority foods and preparations requires two steps--community data collection and concept testing with the community. Technical persons can perform the initial assessment of the various factors and options, but it is very important to carry out extensive discussions with community members, particularly with mothers and grandmothers. Based on the data collected, project managers can identify the food items that appear to be more acceptable than others and then develop alternative recipes for preparation of such foods. The project manager must then return to the community to test the recipes with community members and to elicit their reaction. The final assessment of food alternatives should take into consideration relative nutritional values and community response as well as the foods that seem most appropriate for promotion in the educational strategy.

Several considerations should be kept in mind in developing specific vitamin A-related messages. First, messages should reinforce the positive beliefs and practices already evidenced by mothers, not just motivate them to engage in new behaviors.[15] Messages should be simple and practical and not attempt to convey unnecessary clinical or nutrition information. Mothers should be encouraged to feed their children vitamin A-rich foods as a means of promoting general health, including eye health, rather than as a means of avoiding eye diseases in particular.

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[14] Brun, 1985.

[15] Zeitlin et al., 1990.

Projects Reviewed

With one exception (Rovita/Indonesia), all of the projects that incorporated VAC distribution developed educational messages concerning the importance of consuming vitamin A-rich foods. In many cases, however, the educational activities were weak. Further, among the projects that promoted the consumption of vitamin A-rich foods, few followed a systematic process in developing education concepts. Specifically, most failed to undertake community data collection and concept testing with the community and did not identify foods and preparations to be promoted. In most cases, decisions on which foods to promote appear to have been made by the health/nutrition technicians or by communications planners with little or no preliminary input from the community.

The Thailand project most closely followed a systematic process for choosing a single vitamin A food to be promoted. The green leafy vegetables (GLVs) identified for promotion was the result of extensive research at the household level that included a careful assessment of access to GLVs, an aspect often overlooked in other projects. In fact, the data collection efforts pointed to several GLVs that were acceptable both nutritionally and culturally. Program managers then developed recipes for preparation of the GLVs and returned to the community to test the recipes and their acceptability to women and children. The final decision to focus the communications activities on promotion of the ivy gourd was the outcome of this systematic process.

As discussed in the section on formative data collection, the economic aspects of alternative vitamin A interventions should be taken into consideration. However, many of the projects devoted little attention to economic factors during the formative data collection and concept-testing phases. In two of the projects that did collect some economic information during the formative research stage, women clearly stated that access to GLVs was limited due to cost and seasonal availability (HKI/Bangladesh; HKI/Indonesia). Yet, according to the documents from both of these projects, those responsible for developing the communications strategies clearly stated that mothers' perceptions of limited access did not constitute significant constraints to increased GLV consumption. In the words of Indonesian project documents, "Although GLVs were actually readily available, mothers perceived lack of availability was a significant constraint. This was beyond the scope of the project to address. It was believed that as the demand for GLVs increased, the supply would react accordingly."[16] Both projects concluded that creative messages would overcome these perceived constraints. In vitamin A concept and message development, it is important to give serious consideration to consumer-identified constraints.

Most projects portrayed the need for both vitamin A supplementation and increased consumption of vitamin A-rich foods as important for preventing eye diseases and blindness (Media Nutritional Blindness Prevention Program [MNBP]/Bangladesh; Brazil; Hyderabad,

[16] Pollard, 1989, p.9.

India; HKI/Bangladesh; CARE/Bangladesh; Madras, India; HKI/Philippines). A few projects presented the need for VAC distribution and vitamin A-rich foods solely in terms of promoting general health (HKI/Indonesia; SCF/Malawi). In most cases, the messages encouraged families to accept new practices and, in only a few cases, did they reinforce existing positive beliefs and practices (Rovita/Indonesia).

II.8 Development of Communications Materials

Most programs need some educational materials; in fact, carefully produced materials can be highly effective supports to communications processes. However, in any effort to promote changes in nutrition practices, the quality of the interaction between change agent and mothers is more important than the educational materials.[17] While program managers may have tended in the past to depend too heavily on the presumed impact of communications materials, interest is now growing in the process of communicating with clients or communities. Good interpersonal communications skills can be reinforced with simple, complementary educational materials, but useful educational materials are not sufficient by themselves. In projects with limited budgets, traditional forms of communications may be used (popular theater, songs, or the mobilization of local leaders or women's groups) while professionally produced materials may not be needed.

Projects Reviewed

a. Target Groups

Most of the projects produced some materials for use with the community. These materials were mainly developed around modern forms of communications, including a variety of mass media, print media, and promotional items.

Some projects, however, did not develop "professionally" produced community education materials (IEF/ Malawi; Madras, India; SCF/Malawi). Instead they produced materials based upon traditional communications forms, including songs, poems, plays, and stories, and relied exclusively on locally available resources to carry out educational activities. In the SCF/Malawi vitamin A project, two communications activities required no educational materials: women leaders taught other women how to grow vegetables and demonstrate the preparation of GLVs; and village theater groups presented plays on Maternal and Child Health (MCH) topics in neighboring villages and encouraged those villages to develop their own theater groups.

Many projects produced materials for institutional collaborators, particularly training and technical materials aimed at health, nutrition, education, and agricultural collaborators (Nutri-Bus/Philippines; Rovita/Indonesia; HKI/Bangladesh; Thailand; HKI/Philippines). Materials

[17] Mansour, 1990.

included training films, manuals, newsletters, and other technical documents. Some projects developed materials for radio announcers and journalists (Thailand; HKI/ Bangladesh). A few projects prepared educational materials for health and nutrition policy makers (Iringa/Tanzania; Nutri-Bus/Philippines; Thailand).

b. Persons Responsible for Materials Development and Production

In many of the projects reviewed, media and print materials were produced at the national level--usually through contracts with private firms. In several cases, contractual arrangements were reported to be the most technically feasible approach, though production costs were often high.

In some projects that developed less sophisticated and less expensive media and print materials, some of the materials were produced at the regional and local level. In Thailand, program managers made an explicit attempt to find more local and less expensive approaches to developing media and materials. They held workshops with regional radio announcers and they were provided with monthly health and nutrition information sheets that would enable the announcers to produce their own programs. These same broadcasters proposed to organize monthly "Meet the People" rallies in the villages and the project assisted them. The project also organized workshops with school teachers and taught them to make simple nutrition education teaching aids and to produce their own simple newsletters for parents and students. A local artist prepared a design for a billboard, and local communities were asked to build and paint their own billboards modeled after the local artist's design.

Some of the other projects that followed more of a community development approach encouraged the production of simpler messages by community groups themselves. In the IEF/Malawi project, women developed nutrition songs and dances, and the village band composed health/nutrition songs that were shared with other villages. In the SCF/Malawi project, villagers developed dramas on nutrition and health and later taught neighboring villages to develop their own presentations. In Mauritania, where villagers preferred their own songs to those composed by the town poet (*griot*), the project encouraged villagers to develop their own songs. In India, where story-telling is a traditional art form, the Hyderabad project encouraged villagers to develop stories that incorporated health and nutrition themes.

c. Pedagogical Style

In the projects reviewed, it was not always possible to determine if project-related materials assumed a problem-solving or problem-posing approach. Where such a determination could be made, it appears that the materials used a problem-solving approach in which both problems and solutions were presented in a directive fashion. One illustration of a problem-solving approach is the slide shows and accompanying questions developed in Mauritania. Following the slide show, the accompanying questions ask participants to give the "correct" answers concerning the problems raised and solutions proposed in the slides. There do not, for example, ask the participants to criticize the suggestions made in the show or even their

own present practices; neither do the questions raise issues concerning the likelihood of adopting those suggestions, etc. Projects that appear to have used more problem-posing approaches and materials include Iringa/Tanzania; Tamil Nadu, India; and CARE/Bangladesh.

d. Methodology for Materials Production

In many cases, although the available project documents did not detail the methodology used for materials development, it appears that few projects followed a systematic methodology such as that described earlier. Examples of projects that did follow the prescribed steps for materials development and testing include HKI/Indonesia; Thailand; Rovita/Indonesia; and Mauritania.

Some projects appear to have invested considerable time in carefully developing and pretesting materials but devoted little attention to orienting or training project collaborators in the use of the materials. For example, the Rovita/Indonesia project expended extensive resources in developing a comprehensive manual for nutrition workers but provided limited training and follow-up to the workers on the use of the materials. Experience suggests that, if training or educational materials are to be properly used, those who are expected to use them must participate in training sessions that explain the content of the material and that provide practice on the application of the materials.

e. Development of the Media Plan

Projects that adopted a social marketing methodology all developed media plans (Thailand; HKI/Indonesia; HKI/Philippines; Rovita/Indonesia; HKI/Bangladesh). In several cases, the consulting social marketing or advertising firms assumed primary or exclusive responsibility for developing these plans (HKI/Bangladesh, HKI/Indonesia). It appears that the greater the role of the marketing and advertising specialists in developing those plans, the more pronounced was the preference for the use of modern communications channels and materials (radio, television, slides, posters, flyers, promotional items etc.). The preference for modern advertising methods is clearly stated by one of the marketing consultants involved in several of the vitamin A projects. "A carefully crafted communications plan involving mass media as the focal point can accomplish significant behavioral change objectives."[18] Perhaps the bias in favor of mass media explains why, in four of the five media plans (Thailand is the exception), interpersonal communications channels are accorded minor importance and traditional or indigenous forms of communications are virtually absent.

[18] Pollard, 1989, p.27.

II.9 Training/Orientation and Follow-Up of Program Collaborators

II.9.1 Training and Follow-Up

For the successful implementation of any type of vitamin A program, program collaborators--from the policy to the community level--must be trained or oriented to perform the tasks as proposed. In past community nutrition programs, inadequate training or orientation has often contributed to the failure of program collaborators to assume full responsibility for carrying out program tasks.

In community nutrition programs, occasional training sessions for project collaborators are usually not sufficient. Regular follow-up sessions or supervision is generally necessary to ensure that expectations are clear, to provide reinforcement and encouragement, to elicit feedback on implementation constraints, and to solve problems encountered during program implementation. For field-level workers, regular supervision is necessary, though there appears to be little agreement on the definition of "regular supervision." For community-level volunteers, experiences in several community health programs suggest that effective supervision requires a minimum of once-a-month contact.[19]

Projects Reviewed

Virtually all of the 29 projects included some training activities. However, many of the projects appear to have underestimated the time and resources required both to conduct high-quality training and to follow-up with project collaborators after the completion of formal training. Some projects provided formal training or orientation sessions but, according to the available documentation, did not reinforce the training/orientation with regular supervision or follow-up (Rovita/Indonesia; HKI/Bangladesh; Dharavi, India; HKI/Indonesia). On the other hand, a number of projects that appear to have experienced some success in using community volunteers as peer communicators provided regular supervision (at least once a month) in addition to initial refresher training (IEF Malawi; Madras, India; Tamil Nadu, India; Karnataka, India). Other projects that used trained health personnel to implement community-level activities provided monthly supervision (SCF/Bolivia, CARE/Mali). In the Thailand project, different development sectors conducted regular orientation and follow-up of collaborators.

II.9.2 Training and Orientation Content

The content of training for field-level workers (community volunteers or health, nutrition, or agricultural personnel) who are in direct contact with communities should not be limited to technical considerations but should address the "process" aspects of carrying out their various responsibilities. Training should be structured around the tasks that workers will be asked to

[19] McCommon et al., 1990.

carry out and therefore, should deal with necessary knowledge as well as with the attitudes and skills required to communicate effectively with communities. Evidence from many countries suggests that health workers' negative attitudes towards clients and their poor communications skills constitute barriers to effective communications with families.

The objectives for training and follow-up sessions with both field-level workers and managerial collaborators should be to present them with technical information and program directives and to discuss with them proposed strategies and thereby involve them in the development and monitoring of program strategies.

Projects Reviewed

The projects often did not make detailed information on training content and methods available for this assessment. From the available information, however, it appears that in most cases the content of project training and orientation activities was mainly, if not exclusively, technical. The process aspects of carrying out different levels of program responsibilities appear to have received little attention.

Nonetheless, two examples of projects that devoted considerable effort to the process aspects of field worker training are the Nutri-Bus Project in the Philippines and the CARE project in Mali. In both of these projects, the two- to three-month training of community health nurses stressed interpersonal communications, community organizing, and facilitation skills, although the training also addressed, to a lesser degree, the technical aspects of MCH. Two examples of projects that gave considerable attention to the process aspects of training institutional collaborators are the Thailand and Iringa/Tanzania efforts. Both emphasized strengthening the problem analysis, planning, and management skills of the project collaborators through periodic workshops, planning sessions, and follow-up.

II.10 Monitoring

The purpose of monitoring in community nutrition/vitamin A projects is to provide continuous information on project implementation that can help orient future activities. Monitoring should be construed as a tool both for learning and decision making; therefore, it primarily benefits project implementors--either project staff or community members. In this sense, monitoring is of less relevance to policy makers and project funders.

In the projects reviewed, monitoring systems appear weak. In 15 of the 29 projects, the available project documentation does not mention monitoring at all. In these cases, some informal monitoring may have occurred, but it is impossible to assess the strength of the monitoring function. Consequently, this section discusses several key aspects related to monitoring vitamin A programs and, to the extent possible, includes examples from the projects that incorporated monitoring systems.

II.10.1 Content of Monitoring

The content of monitoring in vitamin A projects varies depending on the program components but, in all cases, should focus on the quantitative aspects of project implementation (inputs and outcomes) and on the qualitative aspects of the implementation process. Traditionally, monitoring and evaluation have emphasized quantitative data collection on inputs and outcomes, but have neglected data collection on the process aspects of implementation.

Projects Reviewed

In the projects that reported the existence of monitoring systems, all emphasize the collection of quantitative information on inputs and outcomes, but devoted much less attention to the process aspects of implementation. Frequently used monitoring indicators were mothers' knowledge, attitudes, and reported practices related to vitamin A deficiency and prevention as revealed through a KAP survey (Mauritania; Nepal; HKI/Philippines). The projects structured around a social marketing approach monitored communications activities by using the generic methodology sometimes referred to as "audience studies," which measures communications inputs (for example, the number of radio spots produced and the number of spots aired) and anticipated results or intermediate outcomes (exposure to the messages, knowledge of the messages, and reported behavior change) (HKI/Philippines; HKI/Bangladesh; Rovita/Indonesia; HKI/Indonesia). While there is some variation in the methodology used, the studies do not, in most cases, include an assessment of the processes associated with working with either communities or institutions.

II.10.2 Use of Monitoring Data

Monitoring consists of two essential steps: the collection and analysis of information, and the discussion of that information as a basis for informed decision making. To the extent possible, those who will be affected by decisions should carry out to the decision making. But, in practice, decision making most often takes place in the context of a meeting in which project staff and relevant others develop alternative interpretations of the data. Monitoring exercises are of limited use if the data are not used for making practical decisions about what to do next.

Projects Reviewed

In some of the projects reviewed, it is not clear if or how the monitoring information was used for planning. On the other hand, several of the projects developed efficient systems for using monitoring data for planning purposes (Iringa/Tanzania; Rovita/Indonesia; Nutri-Bus/Philippines; CARE/Mali; Mauritania; IEF/Malawi). In the Malawi and Iringa projects, community-collected data were discussed at periodic community meetings and used to plan future activities. In the Nutri-Bus project, data were collected on a monthly basis and used in weekly planning meetings. In the Rovita project in Indonesia, monitoring data collected on the social marketing interventions were discussed at regular steering committee meetings to

develop work plans.

II.10.3 Monitoring Methods

Data collection methods vary from formal to informal and from expensive to inexpensive. Assuming that monitoring is a tool for learning and decision making, the more appropriate monitoring mechanisms for data collection and analysis in community nutrition/vitamin A programs are those that tend toward the informal. Program collaborators can use such mechanisms on their own or with limited assistance. More informal approaches to both the collection and analysis of monitoring data are certainly less expensive than more formal ones and probably more sustainable in terms of human and other resource requirements.

Projects Reviewed

In most of the projects reviewed, monitoring was perceived as a formal data collection exercise. The most frequently used approach was the individual questionnaire (HKI/Philippines; Mauritania; HKI/Indonesia; HKI/Bangladesh). As suggested, less formal and less expensive approaches have been used in some projects (CARE/Mali; Rovita/Indonesia; Thailand; Nutri-Bus/Philippines; IEF/Malawi). In the CARE/Mali project, for example, project field workers randomly and informally interviewed 10 mothers every month concerning the mothers' participation in and assessment of project activities. The resulting information was presented in monthly planning meetings and enabled workers to discuss progress and to make plans. In Malawi, a systematic but simple monitoring system was put in place. It includes community-level data collection, manual analysis, and rapid feedback to community volunteers and technicians for activity planning. In Indonesia (Rovita), village women monitored radio broadcasts on a daily basis. It is suggested that programs develop monitoring schemes that combine more formal data collection with less formal techniques described here.

II.10.4 Monitoring Schedule

If monitoring is to fulfill the purpose of providing feedback for decision making during project implementation, it should be carried out on an ongoing basis. More structured monitoring exercises can be planned at regular intervals, but less formal monitoring should be ongoing.

Projects Reviewed

Of the projects that incorporated monitoring systems, most of which tended toward a formal approach, such activities were generally carried out at periodic and predetermined points, often twice a year or mid-way through the project (HKI/Philippines; HKI/Indonesia; HKI/Bangladesh). Such infrequent monitoring does not provide ongoing feedback for planning purposes. Some projects have developed more fluid and ongoing approaches to collecting monitoring data and call for regular meetings with project collaborators to discuss

and act on the data collected (CARE/Mali; Rovita/Indonesia; Thailand; Nutri-Bus/Philippines.)

II.10.5 Responsibility for Monitoring

In keeping with the concept of monitoring as a learning process and a tool for decision making, project "insiders" rather than "outsiders" should assume primary responsibility for monitoring. The insiders are project staff and institutional and community collaborators who are intimately involved in project activities. Whether the monitoring is conducted solely by project staff or with institutional and community representatives, the activities must be guided by a clearly defined system for collecting, analyzing, and using the resultant information. The initial set-up of these systems may require outside technical assistance, but the objective should be to develop systems that can be used by project collaborators themselves.

Projects Reviewed

The available project documentation did not always specify who was responsible for collecting, analyzing, and formulating conclusions based on monitoring data. In those projects in which monitoring was defined as a more formal process, outsiders typically assumed primary responsibility for the entire monitoring function. For example, in the HKI project in the Philippines, a social science research institute conducted two formal monitoring studies during the term of the project. In projects with a community development orientation, communities were involved in data collection and/or subsequent decision making (IEF/Malawi; Iringa/Tanzania; CARE/Mali). In projects that emphasized institution building, institutional collaborators were involved in the monitoring process (Rovita/Indonesia; Thailand; Mauritania).

II.11 Program Evaluation

Program evaluation is a broad topic; however, this discussion is limited to those aspects of evaluation specifically related to vitamin A communications programming and communications effectiveness. Given the considerable overlap in data collected for monitoring and evaluation purposes, a program evaluation is construed as a set of formal evaluation exercises carried out either mid-way through project implementation or near project completion.

The objective of vitamin A program evaluation is to assess the effectiveness of program strategies in achieving project goals and objectives. An evaluation should include an assessment of both the outcomes of project activities and the adequacy of project implementation.[20] It is believed that program evaluations should measure outcomes quantitatively and assess implementation processes both qualitatively and quantitatively. The three major aspects of evaluation to consider are the scope of data collection, the data

[20] Arroyave et al., 1989.

collection methods, and responsibility for program evaluation.

Projects Reviewed

In the projects reviewed, the evaluation components were generally weak. Recalling, however, that the baseline data collection in most of the projects was similarly deficient--either because no data was collected, or the preferred methodologically was insufficient or inappropriate--it follows that it is difficult--if not impossible--to collect valid evaluation data. Of the 29 projects reviewed, 10 were still in progress at the time of this assessment and thus final evaluations were not available. For five of the completed projects, the available documentation did not include information on project evaluation. Of the 13 projects that collected evaluation data, nine include a VAC distribution component, 10 promoted both VAC distribution and vitamin A-rich food consumption, 12 promoted increased consumption of vitamin A-rich foods, and eight promoted production of vitamin A-rich foods.

For each of the 13 projects that collected evaluation data, a summary of the quantitative evaluation indicators and findings is presented below. (Program components are abbreviated as VAC=VAC distribution; consumption = promotion of increased vitamin A-rich food consumption; GLV/yellow vegetable (YV) = promotion of production of GLVs or YVs.)

(1) *Bangladesh: Women's Health Education Project (Consumption)*

Post-test questionnaires revealed an increase in basic knowledge of xerophthalmia from one percent in pretest to 98 percent. The evaluation does not show changes in dietary consumption.

(2) *Bangladesh: Media Nutritional Blindness Prevention Project (Consumption, GLV/YV)*

The project documents provided no information on evaluation methodology but reported that the evaluation showed an increased awareness of xerophthalmia and increased production of GLVs and YVs. Two evaluations were conducted; one reported a decreased prevalence of xerophthalmia while the other reported no decrease. No data on GLV/YV production were reported. The absence of information on the evaluation methodology makes it impossible to assess the reliability of findings. Contradictory findings on prevalence of xerophthalmia were inconclusive.

(3) *Bolivia: Vitamin A Project (VAC, Consumption, GLV/YV)*

In the final evaluation, it was not possible to measure project impact, as the baseline data were deficient and did not include information on either dietary intake or gardening activities carried out before project initiation. The information available in September 1990 stated that the evaluation was based on a limited number of observations and on the analysis of monitoring data. It went on to report that most project families had gardens and that GLV consumption had increased. It did not report on VAC coverage rates. While the findings

appear positive, the available information sufficient to lead to firm conclusions about the effectiveness of the project.

(4) *Brazil: Caruaru Vitamin A Program (VAC, Consumption)*

One hundred percent of the children who participated in the VAC distribution program showed improvements in serum vitamin A levels. No information was available on VAC coverage or on dietary consumption.

(5) *India: Dharavi Xerophthalmia Project (VAC, Consumption, GLV/YV)*

The evaluation reported increases in mothers' vitamin A-related knowledge and decreases in all degrees of malnutrition in children under five years of age. No data were available on VAC coverage or on dietary intake.

(6) *India: Tamil Nadu Integrated Nutrition Project (VAC, Consumption)*

The final evaluation compared the project population to a control population and reported significantly greater improvements in nutritional status of the project population (except for children aged seven to 12 months), as well as decreases in malnutrition. No dietary intake data were reported.

(7) *India: Methods for Nutrition Education with Special Reference to Vitamin A Deficiency (Hyderabad Project) (VAC, Consumption)*

The evaluation (a repeat of the baseline survey) followed a 16-week educational campaign and reported improvements in mothers' vitamin A-related knowledge, but did not address behavior changes. No dietary intake data were collected.

(8) *Indonesia: Social Marketing of Vitamin A (West Sumatra) (VAC, Consumption)*

The final KAP and dietary recall data were both unclear as to the effectiveness of the project activities in bringing about change. The KAP survey data were ambiguous; the changes in attitudes and knowledge in the project and control areas were, in some cases, of similar magnitude. Sometimes changes were greater in the project area, and, at other times, they were greater in the control area. Similarly, the 24-hour dietary recall data suggested that, in some cases, the desired changes were greater in the project area but, at others time were greater in the control area. According to the KAP data, VAC distribution increased in both the project and control areas. The results of the final evaluation from the dietary recall suggested that the communications project did not produce a significant impact on nutrition practices.

(9) *Malawi: Family and Community Nutrition Promotion Program (VAC, Consumption, GLV/YV)*

Given that inadequate quantitative baseline data were collected on dietary intake, VAC coverage, and gardening statistics, the final evaluation consisted of an informal assessment that focused primarily on the project implementation process. Quantitative monitoring of VAC distribution and gardening was therefore sufficient and precluded accurate assessment of outputs for these activities.

(10) *Mauritania: Vitamin A Child Survival Project (VAC, Consumption, GLV/YV)*

The mid-term evaluation reported increases in mothers' nutrition/vitamin A-related knowledge and self-reported behavior (consumption of vitamin A-rich foods) based on a post-KAP survey and an increase in VAC coverage based on a household survey. Changes in knowledge cannot, however, be equated with changes in dietary consumption.

(11) *Philippines: Nutri-Bus Project (VAC, Consumption, GLV/YV)*

The evaluation data reported improvements in mothers' nutrition/vitamin A-related attitudes and knowledge and improvements in target children's nutritional status (weight-for-age).

(12) *Philippines: Social Marketing of Vitamin A (Consumption)*

The final evaluation consisting of a KAP study and 24-hour dietary recall reported more exposure to radio messages, more visits from community health workers (CHWs), and greater attendance at the nutrition classes in the project region, as compared to the population in the control region. While project area mothers exhibited significantly greater changes in their knowledge, attitudes, and beliefs about vitamin A, these changes were not reflected in their dietary practices (dietary recall). The evaluation methodology was appropriate, and the evaluation findings suggested that the project interventions did not have a significant effect on nutrition practices.

(13) *Tanzania: Iringa Nutrition Project (VAC, Consumption, GLV/YV)*

The evaluation reported a significant decrease in malnutrition in project areas compared to control areas. VAC coverage and GLV/YV production data were not available.

Synthesis of Evaluation Findings

As stated above, evaluation data were available for only 13 of the projects reviewed and of those, many of the evaluations were methodologically weak. Yet several programs pointed to improvements in vitamin A-related awareness and knowledge as well as self-reported changes in dietary practices and in VAC administration.

Only six of the projects incorporated evaluation designs that appear to be methodologically adequate for evaluating dietary intake and/or nutritional status of the target groups. Of these projects, four showed improvements in nutritional status (Iringa/Tanzania; Nutri-Bus,

Philippines; Dharavi, India; and Tamil Nadu, India). While all four of these projects included a VAC distribution component, in no case did the available evaluation data include information on VAC coverage rates at the time of the final evaluation. Two of the six projects did not show significant changes in either dietary intake (HKI Philippines; HKI/Indonesia) or in VAC coverage (HKI/Indonesia). The approaches used in the six projects are reviewed below and some conclusions formulated.

Projects That Showed Improvements in Dietary Intake or Nutritional Status

India: Dharavi Xerophthalmia Project (VAC, Consumption, GLV/YV)
The evaluation of the five-year project in Dharavi, India, showed significant decreases in all degrees of malnutrition in children under age five. The project was an integrated, community-based primary health care program that included VAC distribution, nutrition education, and production of vitamin A-rich foods. The project was based on a community development approach and used both traditional communications forms and channels, and simple media materials.

India: Tamil Nadu Integrated Nutrition Project (VAC, Consumption)
The mid-term evaluation of the six-year Tamil Nadu project in India showed consistent improvements in nutritional status in all children under age five except those aged seven to 12 months. The final evaluation, by contrast, showed improved nutritional status for children of all ages. This community-focused, integrated nutrition project included VAC distribution, distribution of supplemental foods, and nutrition education. Interpersonal and traditional community communications were used along with films.

Philippines: Nutri-Bus Project (VAC, Consumption, GLV/YV)
The evaluation of the Nutri-Bus Project in the Philippines showed significant improvements in the nutritional status (weight-for-age) of target children. This integrated health and nutrition project followed a community participation approach and included VAC distribution, nutrition education, and gardening. Communications activities included the combined use of video, group and individual counseling, and simple supporting educational materials.

Tanzania: Iringa Nutrition Project (VAC, Consumption, GLV/YV)
The evaluation of the six-year Iringa Project in Tanzania reported significant decreases in malnutrition in the project areas. This integrated nutrition project followed both a community participation and institutional development approach. The communications component was directed at strengthening the process of communicating nutrition problems and solutions from the household to regional levels and between these levels.

Given the diversity in the program strategies employed in these four projects, it is impossible to compare program effectiveness. Yet the projects evidenced several important commonalities. In all four, vitamin A-related activities were part of a broader, integrated nutrition and health strategy. As a result, it is impossible to establish any direct relationship between any of the specific interventions and their impact on health and/or nutrition. All

relied on strong community-based strategies built on existing community structures and communications channels and therefore were able to nurture community involvement and ownership of project activities. The preferred communications strategies were interpersonal communications through traditional or indigenous communications channels, including community leaders and volunteers; interpersonal communications from health, nutrition, or agricultural personnel; and media and print materials. All of the projects devoted considerable effort and resources to training and follow-up of different levels of project collaborators. Three of the four projects gave priority to developing and sustaining institutional support for project activities.

Each project appears to have had a positive impact on the nutritional status of the target population during the term of the project. It also appears that all four projects incorporated

many of the elements believed to enhance sustainability:

- strong political commitment;
- community ownership and participation;
- development of a trained human resource base;
- targeting of high risk groups; and
- affordable program costs, vis-a-vis available in-country resources.

Projects That Did Not Show Improvements in Dietary Intake or VAC Distribution Coverage

Indonesia: Social Marketing of Vitamin A (West Sumatra) (VAC, Consumption)
The final evaluation stated that neither VAC distribution nor dietary intake of vitamin A-rich foods increased significantly in response to project communications interventions. The project strategy emphasized the use of mass media, particularly radio and "point of sale" activities. To a much lesser extent, the project relied on interpersonal communications channels--namely, the village *kader* (village health workers)--but encountered considerable problems with the lack of motivation and high drop-out rate among the *kader*.

Philippines: Social Marketing of Vitamin A (Consumption)
The final evaluation findings suggested that the project interventions did not significantly influence vitamin A-related nutrition practices. The communications strategy emphasized use of the mass media, mainly radio and to a lesser extent, television as well as print materials. Though the media campaign was intended to support health workers' interpersonal communications with the target audience, it failed to deliver adequate training and regular follow-up. The workers were, however, supplied with the necessary material.

Despite their methodologically sound evaluations, these two projects did not demonstrate that communications activities were able to produce significant changes in VAC coverage rates (HKI/Indonesia) or dietary intake (HKI/Philippines; HKI/Indonesia). Both used a similar social marketing approach that focused on the use of mass media and print materials.

Interpersonal communications activities were planned as a support to the mass media communications efforts, but received insufficient attention and therefore were ineffective.

Among the other commonalities exhibited by these projects:

- Both carried out formative community research that provided the basis for the media and materials development and for the identification of appropriate communications channels.
- Both developed and pretested media and materials in accordance with the generic social marketing methodology.
- Both produced educational materials for community-level and/or public-sector health workers.
- Both provided only limited training of health workers; training ranged from one-half day to three days.
- Both projects failed to institute a system of regular supervision/follow-up of health workers.
- Both projects reported that the health workers' motivation and performance in project activities was less than expected. While both projects carefully developed communications media and educational materials, it appears that the common weaknesses of these projects were:

    - overemphasizing the use of mass and print media and underemphasizing the use of interpersonal communications channels;
    - relying almost exclusively on modern communications channels; and
    - engaging in limited community-level activities to elicit community input and to mobilize community involvement.

CONCLUSION

It follows from this assessment that two of the most important aspects of program development and implementation in nutrition communications program are community participation and properly focused data collection. Community participation at every level of program design, development, implementation and evaluation is essential to assure appropriate interventions and sustainability. Likewise, accurate, useful and adequate data collection is necessary for successful program design, implementation and evaluation.

Community Participation

Program planning and development must be rooted in ongoing collaboration with local institutions and communities to ensure that the involved parties develop an increased sense of ownership, enhance their technical ability, and make a strong commitment to project goals. Most of the 29 projects failed to incorporate the communities fully into project design, implementation and evaluation.

Most of the projects used a blueprint approach to planning and designing program strategies for implementation by project staff. Consequently, the collaborating institutions and communities were not involved in the program design decisions and therefore were less likely to maintain project activities over time.

Input from the community, especially from women, was rarely solicited during program planning. Given that women were the primary targets of many of the communications activities in the 29 projects, program planners overlooked a valuable source of information on knowledge, attitudes and preferences.

Few project strategies targeted existing social networks, community groups, and institutions. Projects designed around a community development component succeeded at including these group-level target groups; however, most projects focused their intervention activities on individual mothers and children.

Training of both institutional collaborators and field workers did not focus sufficiently on the development of skills such as interpersonal communications and task implementation in support of program goals. In projects that did provide regular follow-up or supervision to project personnel as part of the training program, personnel retained their skills throughout the project.

Most projects focused on encouraging acceptance of new nutrition-related practices, not on reinforcing existing positive dietary practices through message development and intervention design.

Data Collection

Data collection at many levels was inadequate in most of the projects reviewed. A major contribution of the social marketing approach to nutrition communications is a systematic methodology for gathering formative and baseline data for project development. This methodology is useful for program planning and message development, in all vitamin A nutrition communications projects, including those that do not use mass media communications strategies.

Many of the 29 projects failed to apply a systematic methodology that involved community and local institutions in performing preliminary research and developing communications messages and materials. Several of the projects did not collect formative data on nutrition-related beliefs, practices, and resources at the community level. As a result, program planning and implementation did not adequately addressed community-level problems. Projects structured around a social marketing approach applied more clearly defined methodologies for formative data collection.

Many projects based their formative and baseline data collection solely on KAP surveys. Because KAP surveys by definition ask for information on self-reported behavior, they typically yield insufficiently reliable data. It is advisable to use additional methods of preliminary data collection to validate KAP survey data.

The collected data often did not fully address the needs of the project staff in terms of planning and implementation, particularly when an outside group performed the data collection.

Preliminary research often did not consider the broader sociocultural and economic context of nutrition-related practices in the development of communications strategies and materials.

Only a few projects performed dietary intake assessments, making any evaluation of change in consumption of vitamin A-rich foods impossible in most projects. Projects that set improved dietary behavior as an objective must gather baseline dietary information.

The monitoring and evaluation components of the projects were generally insufficient. One-half of the projects did not conduct any formal monitoring at all. Among those that did monitor, the information collected during monitoring was not necessarily used for continued program planning. However, some projects developed efficient monitoring systems that made direct use of the information generated. Projects that engaged in more formal, periodic monitoring rather than continuous monitoring were not able to provide ongoing feedback for planning purposes. The projects under review rarely specified process objectives; when they did, few measured the quality of the processes themselves. Lack of attention to process indicators was a major shortcoming of many of the monitoring and evaluation efforts reported by the projects.

Other Observations

Several of the 29 projects suffered from insufficient funding or an inadequate timeframe in which to achieve the desired behavior change. This was as much a problem of the requirements of donors' guidelines as it was a shortcoming of program planning. Behavior change, especially that associated with traditional dietary practices, is extremely difficult to motivate and requires intensive and sustained interventions over the long term to produce the desired outcome. It is speculated that the kind of cultural change required to modify dietary habits might take a generation rather than the two or three years allotted by most of the projects reviewed in this assessment.

Projects that combined mass media and interpersonal communications forms appeared to have been most successful in improving nutritional status, according to their evaluations. Projects based entirely on the social marketing approach and focusing specifically on modern forms of communications did not show dietary improvement in the primary target groups.

Although mass media interventions reach large numbers of people at relatively low cost and can increase knowledge among the target group(s), such interventions may not be sufficient to motivate the desired behavior change. A review of the projects indicates that a combination of mass media and resource-intensive interpersonal communications is necessary to effect long term change.

RECOMMENDATIONS

1. Communications components of vitamin A projects should include a strong interpersonal, community-based communications strategy that uses mass media, when appropriate, as a support within an implementation framework that can be sustained by the community.

2. Where projects are expected to demonstrate improved nutrition practices, nutrition communications efforts must be developed and sustained by local communities and institutions over the long term. A.I.D. (and other donors) should not expect measurable behavior change from vitamin A communications projects in less than five years and should fund projects accordingly.

3. A.I.D. (and other donors) should insist that appropriate formative research and baseline research be conducted during the initial stage of projects.

4. Appropriate monitoring and evaluation systems for measuring project and process outcomes must be designed during the project planning stage and then carefully implemented to assess project impacts and results.

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APPENDIX A

Terms of Reference and Scope of Work

TERMS OF REFERENCE
FOR
VITAMIN A SOCIAL MARKETING ASSESSMENT

Virtually all of the vitamin A interventions currently available require some behavior change on the part of the target populations, whether it is compliance to supplementation campaigns, purchase of fortified foods or modification of dietary intake. A promising but unproven supportive tool in the effort to create behavior change and increase awareness of health problems and solutions, is social marketing. In order to determine the suitability and effectiveness of social marketing as a tool in improving the vitamin A nutritional status of populations, the Office of Nutrition has requested an assessment of the experiences to date in the social marketing of vitamin A.

I. Definition

Although the term "social marketing" is conventionally defined as the use of commercial marketing and advertising techniques to promote a product for social benefit, for the purposes of the Vitamin A Field Support Project, a broader definition will be employed. Social marketing will refer to a broad range of communication interventions, including individual and community-level nutrition education, mass media campaigns and any form of motivational, informational or educational intervention designed to foster improved vitamin A status.

The terminology used to describe these activities may be of some importance to this project in the future. Because the term "social marketing" has been used to refer to various activities, it may carry with it a variety of connotations. In West Africa, for example, the term "marketing" has negative connotations, and health communications specialists have successfully used the term "social mobilization" to refer to the same activities.[1] And while some social marketing specialists focus on mass media interventions, for many developing countries other types of communications efforts are more appropriate. What distinguishes social marketing from nutrition education is the specified goal of identifying potential motivating factors in a target population, which might be addressed not only to increase knowledge of a problem, but to encourage making the appropriate behavior changes to address it.

II. State-of-the-Art

Social marketing strategy as applied to child survival has been tested in projects of the Agency for International Development by both the Mass Media and Health Practices Project

[1] Discussion with Claudia Fishman, Academy for Educational Development, Jan. 17, 1990.

(MMHP) and the Communication for Child Survival Project (HEALTHCOM). These communication efforts have made a significant contribution to improved child health when methodologies have been conscientiously applied.

In Ecuador, extensive media efforts during 1985 and 1986 supported efforts to immunize and weigh all children under five and distribute packets of oral rehydration salts. In less than a year the program had delivered 1,200,000 vaccinations. Seventy-five percent of mothers had ORS packets at home and the percentage reporting usage increased from 38 to 53 percent.

After two years of radio promotion of a new oral rehydration solution in Honduras, 60 percent of rural women reported using the new product. Child mortality associated with diarrhea dropped from 40 percent to 24 percent.

In Indonesia, the Nutrition Communication and Behavior Change Project used these methodologies to improve child feeding. Evaluation showed that by the age of 24 months, 40 percent of the project infants were better nourished than those in the comparison group.[2]

The successes of social marketing in these and other health programs suggests that similar techniques might be useful in promoting improved vitamin A status. Yet it is important to consider factors which might differentiate social marketing of vitamin A from social marketing for other interventions. These might include cultural or traditional barriers to the use of new foods, failure of the population to identify nutritional blindness as a local problem and lack of access to suggested foods or supplements.

Several vitamin A programs have social marketing components. However, there has been little or no evaluation of these interventions, and there exists no comprehensive assessment of what has worked and what has not. The purpose of the assessment is to look at the universe of experience in social marketing of vitamin A to draw together the lessons learned, to highlight what has been accomplished and to give direction to the project in providing technical assistance in social marketing.

The scope of this assessment will be limited to efforts in the social marketing of vitamin A. However, it is necessary that the consultant performing the assessment be familiar with other social marketing efforts in health, family planning and nutrition.

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[2] All examples taken from Rasmuson, Mark R., et.al., Communication for Child Survival, Academy for Educational Development (Washington, DC: 1988).

SCOPE OF WORK
FOR
SOCIAL MARKETING ASSESSMENT
TASK #303

ASSESSMENT PLAN:

1. Identify all current and past (since 1975) AID funded vitamin A social marketing, nutrition education and communication efforts (S&T/Health and S&T/Nutrition, FVA/PVC, bilateral, Peace Corps). This will be done primarily through use of information collected by AED and the "Inventory of USAID Funded Projects/Grants with a Vitamin A Component" (ISTI, February, 1990).

2. Identify all Vitamin A social marketing efforts supported by other donors, i.e., multinationals, the World Bank, etc.

3. Obtain and review written reports/documents from these identified projects.

4. Develop interview schedule/questionnaire and apply to each project. (This will be particularly important for projects that have no systematically collected evaluation data, but will also provide insights into the project's process.) Interviews will be conducted with U.S.-based project management staff and persons responsible for in-country implementation. In addition, interviews and focus group discussions will be held with project target populations. It is important to identify individuals who can speak candidly about projects, both in and out of country.

5. Visit three field sites to assess social marketing efforts. Sites to be determined by project officers.

6. Analyze information gathered, specifically:

   For each project:

   a. Review appropriateness of the project design (e.g., validity of assumptions guiding project design, whether goals and objectives are specified, realistic, measurable, and relevant to the stated problem).

   b. Review project implementation (e.g., baseline data collected, formative research conducted, activities related to project objectives, formative research results applied to project implementation, changes in implementation based on experience).

c. Review project outcomes (e.g., changes in KAP and increased vitamin A coverage, any unexpected results, sustainability, replicability). Gather any handbooks/guidelines drafted or printed by projects.

d. Review project costs (e.g., in-country, total project, relative allocations of project components). Relate project costs to proposed and actual target populations.

e. Assess the extent to which the social marketing concepts and methodology has been successfully transferred to host country staff.

Deliverables:

The Subcontractor will deliver to VITAL a report of the assessment findings, in the format outlined in "VITAL Report Guidelines," including:

A. Comprehensive list of vitamin A social marketing efforts both AID funded and those supported by other donors.

B. Report assessing the social marketing efforts of identified projects, including:

- Documentation of strengths and weaknesses in program methodology, implementation and outcome;
- Compilation and analysis of the lessons learned from vitamin A social marketing efforts to date;
- Recommendations for social marketing of vitamin A, and efforts which might be undertaken by VITAL;
- Identification of issues for further investigation, including methodology, design and implementation.

If the report is prepared by computerized word-processing system, PATH will deliver to VITAL a diskette copy of each deliverable using software compatible to VITAL standards at the time the report is delivered.

Field visits:

The criteria for selection of field visit sites include:

o Type of social marketing intervention (VAC, mass media nutrition education, home gardening, other)

- o Size and scope of the project (national, regional, district, village)
- o Whether current or past (how long ago?)
- o Duration
- o Location (urban/rural, Africa, Asia, Latin America)
- o Evaluation data collected/available
- o Costs (number/range of projects that can be assessed in a visit to single country)

APPENDIX B
Project Profiles

Project Title	Media Nutritional Blindness Prevention Project (MNBP)	**Bangladesh**
Implementing Agency	Worldview International Foundation; Institute of Public Health Nutrition (Ministry of Health and Family Planning)	
Funding Agency	United Nations International Children's Emergency Fund/Helen Keller International	
Dates	1984-1986, 1987-1989	
Cost	Unknown	

Project Goal

To reduce night blindness

Project Objectives

(1) To increase awareness about the cause of nutritional blindness
(2) To motivate the target group to grow vitamin A-rich vegetables
(3) To motivate the target group to adopt preventive measures by changing food habits

Target Groups

Children under nine years of age; the 80 percent of the population living below the subsistence level in the district

Baseline Data Collection

The local Institute of Social Welfare Research carried out a baseline study to determine the prevalence of nutritional blindness, parents' knowledge of causes and prevention of nutritional blindness, vitamin A-rich food patterns, incidence of vitamin A depletion in children with diarrhea, and availability of pure drinking water. These indicators were used as a basis to measure project impact.

Communications Strategy

According to the project document, a variety of mass media and intensive communications approaches were used to promote increased production and consumption of vitamin A-rich foods. The mass media included radio, television, documentary films, and posters. The intensive communications approaches included vitamin A/nutrition education and demonstration gardens in the schools, folk songs and poems on production and consumption of vitamin A, house-to-house visits by women volunteers, and the training of folk singers, teachers, women volunteers, and social and religious leaders.

Communications Messages

A set of seven messages was developed by the Advisory Message Council, a committee of representatives of nongovernmental organizations (NGOs) and international organizations. The messages promoted both the production and consumption of vitamin A-rich foods. They dealt not only with suggested local vitamin A-rich foods but explained the relationship between xerophthalmia, morbidity, and vitamin A deficiency.

Training

Vitamin A training activities were carried out with teachers, NGO media workers, and small numbers of health workers and folk media workers. However, no mention was made of follow-up/supervision of trainees after the initial training. Training methods included traditional methods such as lectures, flip charts, slides, and posters. The final evaluation did not discuss the effectiveness of trainee performance after training.

Evaluation

In 1986, an evaluation of the project was carried out in part by a research institute of a local university (ISWR) and in part by HKI. The baseline survey was repeated by ISWR and, based on the comparative data, it was concluded that the media campaign contributed to increased awareness of xerophthalmia, that the production of green leafy vegetables (GLVs) and, to a lesser extent, of yellow fruits (YFs) increased, and that the prevalence of xerophthalmia decreased. The methodology used for both the baseline and end-of-project evaluations are not explained in detail in the available documentation. The evaluation also concluded that posters, folk media, and films were more effective than cinema, slides, radio spots, flip charts, and billboards--though it does not define effectiveness. The ISWR report concluded that the use of radio was overemphasized in the strategy to the neglect of other kinds of communications activities, notably those at the community level. The report recommended that in the future the project should reinforce the activities with the schools and with the use of folk media. In addition, it recommended that more attention be devoted to community-focused activities, including the training of, and periodic meetings with, community and religious leaders and the training of school teachers, health workers, and female community volunteers.

The conclusions of the HKI portion of the evaluation were in many respects similar to those of the ISWR portion, except for a few cases. For example, the HKI evaluation reported that the prevalence of night blindness did not decrease during the project period, whereas ISWR reported the opposite. While both HKI and ISWR were generally positive about the project's accomplishments, HKI's praise for the project was more resounding. The authors of the HKI report stated, "We recommend expansion and extension of the project which, in our view, is one of the most exciting media initiatives to prevent nutritional blindness and change feeding habits in Asia" (HKI, 1986, p. 7). Unlike ISWR, HKI did not express concern about the weakness of the community-level activities. HKI did identify several shortcomings in the project design, including inadequate formative research, insufficient pretesting of the media materials, and the lack of measurable end-of-project objectives.

Conclusions and Lessons Learned

- **Communications Strategy** As the title of the project suggests, the strategy was based primarily on the use of a panoply of mass media, including radio, television, film, newspapers, and booklets of folk songs and poems. In addition, "intensive media" were used, including vitamin A/nutrition education and demonstration gardens in the schools and folk songs and poems. It was reported that the media strategy was far more successful in reaching men than women. Given the importance of reaching women, care should be taken in the future to identify the communications channels/activities to which women have greater access.

- **Message Development** According to the project documents, the educational messages were developed by a committee of representatives from different health institutions. The establishment of the Advisory Message Council was a positive initiative in terms of involving various institutions in formulating a consensus list of vitamin A-related messages. However, the council's work mainly reflected a clinical nutrition perspective. These clinical priorities are one of the necessary elements for the development of nutritional messages. The other element is the community perspective on nutritional problems and practices. The available project documentation reported no preliminary

collection of information from the community. The 1986 project evaluation carried out by HKI identified the need for initial, in-depth anthropological data collection.

The messages themselves focused on teaching people about the causes and prevention of xerophthalmia. A more effective strategy would have pointed to the need to consume certain vitamin A-rich foods because of their contribution to the general health and well-being of children and women.

- **Community Involvement** The project document did not explicitly address community involvement in the project, but it is assumed that community participation included attending to the media messages and adopting the proposed behaviors. On the continuum of participation, attending to the media is a low level of involvement. The portion of the evaluation conducted by ISWR suggested several times that the overall project would have been more effective if community involvement had been greater.

- **Training and Follow-Up** The project trained folk singers, teachers, and NGO personnel, although the documentation does not detail subsequent activities implemented by the trainees. Similarly, no information on periodic supervision of trainees was found. Based on the available information, it appears that the pedagogical approach used in training was traditional and directive rather than nondirective and participatory.

- **Promotion of Vitamin A-Rich Food Production** The project encouraged increased production and thus improved access to vitamin A-rich foods. Specifically, campaign messages encouraged families to grow both GLVs and YFs, and efforts encouraged schools and clinics to organize gardens. The available documentation suggested that the project devoted much more attention to the mass media activities than to the gardening activities. Neither part of the final evaluation discussed the outcomes of the gardening experiences in terms of the provision of technical assistance, the quantity of food produced, or the use of such food. The encouragement of food production was an important element in the project, but apparently only minimal human and material resources were allocated to it.

- **Evaluation** The project evaluation was carried out in part by HKI and in part by ISWR, a research institute of a local university. Neither the relationship between the two parts of the evaluation nor the methodology was clear.

Project title	Nutrition Education and Mass Communication	**Bangladesh**
Implementing Agency	HKI; UNICEF; Institute of Public Health Nutrition (Ministry of Health and Family Planning)	
Funding Agency	USAID	
Dates	September 1987-September 1991	
Cost	$90,000 for media and media materials	

Project Objectives

(1) To increase awareness of the importance of vitamin A
(2) To increase effectiveness of vitamin A capsule distribution programs
(3) To increase vitamin A dietary intake through nutrition education and social marketing
(4) To conduct a feasibility study of food fortification with vitamin A

The overall strategy was to develop a series of messages within the context of a communications delivery plan that was replicable, cost-effective, and achieved the desired behavioral outcome. The project results provided input into ongoing and future government and NGO vitamin A programs.

Target Groups

The primary targets were mothers and fathers. Secondary targets were mothers and sisters-in-law, older family members, health assistants (village health workers), and family welfare assistants. Tertiary targets included formal and informal authority figures, health personnel, and traditional health providers.

Formative Research

Manoff International provided social marketing technical assistance at various points in the program's development and implementation. Manoff's involvement included conducting a quantitative baseline study, developing the project workplan, conducting the formative review and research, developing and testing the interventions, producing the messages and communications plan, testing and revising the messages, and monitoring program implementation.

Baseline Data Collection

No baseline data on dietary intake were collected.

Communications Strategy

The strategy included activities aimed at policy makers, NGOs, health workers, and the community at large. For policy makers and NGOs, a series of seminars was held and information on vitamin A deficiency and interventions was distributed. One objective of the nutrition campaign was to mobilize communities for the semiannual vitamin A capsule (VAC) distribution. For the rest of the year, the campaign messages promoted increased consumption of vitamin A-rich foods. Educational materials (radio spots and announcements, television spots, communication aids, cassette tapes for bicycle-mounted loudspeakers, community participation leaflets, project orientation booklets, and posters) were developed in Bengali.

Social Marketing Campaign Messages

The messages promoted VAC distribution and the production and consumption of vitamin A-rich foods. More specifically, the messages regarding VAC primarily addressed the government's lack of motivation in the distribution system as well as its tendency to deliver capsules to the incorrect age groups of children. Mothers and secondary/tertiary targets were encouraged to increase demand for vitamin A capsules and to increase daily consumption of defined vitamin A-rich foods by children four to 60 months old similarly pregnant and lactating women were encouraged to increase consumption of vitamin A-rich foods.

The project devoted considerable effort to the development of interpersonal communications links to mothers through the use of government and NGO field workers. Orientation meetings were conducted with all relevant government and NGOs in the project area. A field office to support these efforts and to motivate community participation activities was established.

Feasibility Study of Food Fortification

A detailed study identified wheat as a food that could potentially be fortified.

Training

The project devoted considerable effort to the development of training materials and the training of policy makers, NGO personnel, health personnel (700), and paraprofessional health workers (26,500).

Monitoring

Following semiannual VAC distribution sessions, monitoring and tracking studies were undertaken through random sampling of mothers and providers to determine the program's effectiveness and impact.

Evaluation

A mid-term evaluation, carried out in January 1990 before the launching of the intervention phase, addressed the effectiveness of the project's development phase. Though it concluded that the project was being executed according to the original plan despite numerous personnel changes, the evaluation pointed out several weaknesses in the program design, including insufficient formative data collection, overemphasis on the use of mass media as opposed to interpersonal communications, and inappropriate use of mass media options. The project management reviewed these findings and made some adjustments to the program that seemed appropriate; however, HKI and Manoff International noted that the evaluation failed to review a number of important documents that would have clarified many of the issues raised.

Conclusions and Lessons Learned

- **Support for Ministry of Health Vitamin A Program** The underlying project strategy was to support the ongoing government vitamin A program. In terms of ensuring sustained impact, the support provided to existing staff and services was beneficial.

- **Target Groups** The target groups identified in the project were not limited to mothers. Other persons who formally or informally influence mothers' attitudes and behavior were also targeted, including husbands, older persons in the community, and traditional health providers.

- **Communications Messages** The messages diffused in the social marketing campaigns focused not only on VAC distribution but also on the need to increase consumption of vitamin A-rich foods as a means of contributing to long-term solutions to the vitamin A deficiency problem.

- **Formative Research** Formative qualitative research on infant feeding practices was carried out by a local research firm with technical assistance from Manoff International. Jeff Watson of HKI believes that too much time and energy were allocated to the formative research. On the other hand, the mid-term evaluation states that the scope of the research was too narrow, especially because it did not look in detail at the critical issue of economic access to vitamin A-rich foods.

- **Baseline Data Collection** As no baseline data on dietary consumption were collected, it was not possible to measure end-of-project changes in vitamin A-rich food consumption.

- **Institutional Collaboration** One of the project's objectives was to support the government's vitamin A program and the activities of other NGOs. According to project documents, close collaborative relationships were established with these institutions. The seminars and educational materials developed to support this "organizational mobilization" effort were believed to have been beneficial. Watson (HKI) suggests, however, that the collaboration with the Ministry of Health (MOH) was insufficient and that the development of the social marketing strategy was carried out "in a vacuum."

- **Training and Follow-Up** The project devoted considerable effort and resources to training policy makers, NGO personnel, health personnel, and paraprofessional health workers. At the time of the mid-term evaluation, there was no existing or planned system for follow-up/supervision of the trainees. Particularly for the health personnel and paraprofessionals, formal training alone is not sufficient to ensure effective implementation of program activities in the field.

- **Communications Strategy** The project strategy included the training of personnel and the distribution of educational materials to policy makers, NGOs, health personnel, and community health workers (CHWs). Another component, aimed at the community, was a communications strategy that used the social marketing format supported by Manoff International. This strategy relied largely on the mass media, although health workers were to carry out community-level interpersonal educational activities by using the educational materials prepared by the project. One of the early project documents suggested that community media (song, dance, drama) might be used in the project. Cultural troupes were considered but were expensive; further, management constraints limited their use at the required scale. Bicycle-mounted loudspeakers were used instead.

  In Watson's opinion, the communications strategy placed too little emphasis on community-level interpersonal communications activities. The mid-term evaluation suggested that the project "has relied too heavily on an advertising model--one which stresses the use of repetitive spot advertising and reminder media--and has not sufficiently explored a greater variety of (mass media) programming ... and interpersonal communications" (Parlato, 1990).

  At the outset, the project budgeted considerable resources for advertising in the local press. However, literacy in Bangladesh is very low, particularly among women. The mid-term evaluation suggested

that newspaper advertising was not an effective strategy. Consequently, this component of the project was reduced and retained only as a source of information for community leaders.

- **Production and Broadcasting of Radio and Television Material** A local advertising firm was hired on a contractual basis to produce the radio spots. The mid-term evaluator believed that radio spots were an expensive and unsustainable approach in a poor country such as Bangladesh. He suggested that one cost-effective alternative for producing nutritional messages would be training radio and television producers to include health and nutrition messages in their existing programming. A second suggestion was that HKI itself produce radio materials in conjunction with private producers or organizations such as UNICEF. Free broadcasting was promised for radio spots, but, as in other countries, actual timing of broadcasts often did not correspond with the agreed-upon schedules.

  The mid-term evaluation identified another constraint to contracting out the media production to an advertising firm. Such firms' marketing experiences were restricted to urban audiences and to consumer products. In the project's target area, the population was predominantly rural. Other countries have experienced similar problems in contracting with advertising firms.

- **Promotion of Increased Production and Consumption of Vitamin A-Rich Foods** The campaign messages encouraged both the production and consumption of vitamin A-rich foods. In both the formative research and initial message testing, communities reported that access to vitamin A-rich foods constituted a constraint to increased consumption. (Project documents reported that 80 percent of households with a blind child were landless.) While the first annual project report stated that material and technical support for vegetable gardening should be provided, other available project documents did not report on any project activities of this type. In the absence of improved access, there were definite limits to the changes in nutritional practices that could be achieved by communications messages alone.

Sources of Information

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Watson, Jeffrey. Asia Pacific Regional Manager, Helen Keller International, Inc. Interviewed June 12, 1990.

Project Title	Vitamin A Component of Child Survival Program	**Bangladesh**
Implementing Agency	Bangladesh Rural Advancement Committee (BRAC)	
Funding Agency	UNICEF; Swedish International Development Agency; Swiss Development Cooperation	
Dates	October 1986-October 1990	
Cost	Unknown	

Very limited documentation was available to review this project.

Project Objectives

(1) To strengthen semiannual government distribution of VAC
(2) To encourage mothers to grow ß-carotene-rich foods and to feed them to their children

Target Group

All children between six months and six years in 19 districts of the country

Strategy

Nutrition and health education; assistance to government to improve the organization of VAC distribution. Mass media: posters, leaflets, radio, and television. Interpersonal communications: home visits from BRAC health workers for combined vitamin A, oral rehydration therapy (ORT), and immunization education. Group educational meetings with men.

Messages Developed

Messages focused on promoting the consumption of carotene-rich foods and on promoting semiannual VAC distribution.

Training

BRAC health workers were trained in diagnosis of vitamin A deficiency and in how to instruct mothers on the importance of vitamin A.

Evaluation

It was reported that a comprehensive evaluation was conducted to assess changes in nutritional behavior and VAC distribution coverage. Unfortunately, these evaluation results were not available for this assessment.

Conclusions and Lessons Learned

- **Support for Government VAC Program** One of the objectives of the project was to reinforce the government VAC program, a sound objective.
- **Use of BRAC Field Workers** Vitamin A activities were integrated into the activities of existing field workers. Similarly, vitamin A content has been integrated into a broader child survival program. Such an approach is preferable to addressing vitamin A concerns in isolation.
- **Evaluation** Because the evaluation results were not available, it is impossible to comment on the evaluation's methodology or outcome.

Project Title	Women's Health Education Project	**Bangladesh**
Implementing Agency	CARE	
Funding Agency	CARE/Norway and CARE/USA	
Dates	July 1986-June 1989	
Cost	Unknown	

Very limited documentation was available to review this project.

Project Objectives

(1) To enable women to learn and retain the health information imparted to them
(2) To encourage women to improve health practices
(3) To encourage women to pass on to neighbors and relatives the information learned

Target Group

Illiterate and destitute rural women who are widowed, separated, or divorced; are the sole household earners; and are employed by another CARE project (Rural Maintenance Project)

Education Strategy

The education strategy was structured around health education and VAC distribution. Educational activities consisted of a series of 11 discussions (one topic per session) among groups of women in a classroom or outdoors. A flannel graph and flip charts were used in the education sessions.

Communications Messages

The vitamin A messages dealt with detection and treatment of night blindness; corneal ulcerations; the relationship between pneumonia, measles, kwashiorkor, gastroenteritis, tuberculosis, and vitamin A deficiency; VAC; recommended GLVs and YFs and preparation of GLVs.

Evaluation

A pre- and postquestionnaire was administered to the women participants to measure information retained and changes in health practices. The posttest immediately following completion of the series of education sessions showed that knowledge of how to cure night blindness had increased from 1 percent to 98 percent. Six months after completion of the education sessions, the questionnaire was administered to a sample of the women to evaluate the overall impact of the educational activities.

Conclusions and Lessons Learned

- **Target Group** The decision to target poor illiterate women who were already working on another CARE project apparently took advantage of accessible groups of women. Working with groups of women who know each other is an effective way for involving women in group discussion and learning.

- **Education Strategy** It was reported that "open discussions" were carried out during the education sessions, although the methodology used in these sessions was not clear. It is known that adults learn best when they are actively involved in discussing their own situations and problems as well as

proposals for new behaviors. To the extent that genuine two-way communications occurred in the group sessions, learning may have come about.

- **Communications Messages** The vitamin A messages covered a variety of topics, including detection and treatment of vitamin A-related eye diseases, VAC, the relationship between other illnesses and vitamin A deficiency, and the promotion of GLVs and YFs. The messages seem to have been too numerous and too clinical in nature to produce an impact on behavior. Priority messages should deal with the need for VAC and with the consumption of GLVs to promote good health, including good eyesight.

- **Evaluation** The evaluation tool used to measure the impact of the project was a pre- and post-questionnaire. This tool is adequate for measuring changes in knowledge but is not reliable for measuring changes in practices. A pre- and post-24-hour dietary recall would been useful for this purpose.

Project Title	Vitamin A Project (Component of Child Survival Project)	**Bolivia**
Implementing Agency	Save the Children Federation (SCF)	
Funding Agency	USAID	
Dates	September 1987-September 1990	
Cost	$34,000	

Project Objective

To decrease vitamin A deficiency in children and women

Target Groups

Children under five years of age, primary school children (five to 12 years of age), and women 15 to 45 years of age

Baseline Data Collection

A study was carried out to assess the prevalence of vitamin A deficiency. The study is reported to have been methodologically weak (Mohammed Mansour, SCF)

Project Strategy

The following vitamin A activities were integrated into the ongoing primary health care program:

- semiannual VAC distribution in the community (children aged one to 12 years and lactating women)
- nutrition education, including cooking demonstrations for mothers' clubs with follow-up home visits for pregnant women
- agricultural demonstrations and home and school gardens that introduced new types of vegetables
- nutrition education and distribution of vitamin A-enriched milk in primary schools
- inclusion of vitamin A deficiency as a topic in adult literacy materials

All activities were coordinated and supervised by the health promotor and the mothers' clubs.

Communications Component

From the available documentation, it appears that the vitamin A-related communications activities consisted of interpersonal communications between the social worker, health promoters, agricultural extension workers, and mothers and between teachers and school children. All communications activities were carried out with the existing mothers' clubs or schools. In both cases, the educational activities in the form of nutrition lessons/classes, gardening demonstrations, and cooking demonstrations. The project proposal stated that mass media would be used as well, although no evidence of such an approach is available.

Training

The project social worker was responsible for conducting training for mothers' club members, health promoters, and agricultural extension workers. The training for all types of trainees focused on vitamin A-related eye diseases, prevention of vitamin A deficiency through VAC and consumption of GLVs, and vegetable gardening.

Supervision	The social worker visited each of the mothers' clubs once a month to conduct education sessions and to follow up the other activities.
Monitoring	No information was available on project monitoring.
Evaluation	In the final evaluation, it was not possible to measure project impact as the baseline data collection was weak and did not include information on either dietary intake or gardening activities carried out before project initiation. The limited information available in September 1990 stated that the evaluation was based on a limited number of observations and on the analysis of monitoring data. The evaluation reported that a majority of the project families had gardens and that GLV consumption had increased. It did not report on VAC coverage rates. While the findings appear positive, the available information does not permit the formulation of conclusions about the effectiveness of the project.

Conclusions and Lessons Learned

- **Baseline Data Collection** Baseline data collection consisted of a study of the prevalence of vitamin A deficiency. It did not include dietary intake data.

- **Formative Research** No formative qualitative data were collected, an important element in developing the content of nutrition education programs.

- **Communications/Educational Activities** The nutrition education activities used interpersonal communications channels, took advantage of existing structures (mothers' clubs and schools), and worked with groups of mothers or students. Research in nutrition education suggests that peer groups are a good vehicle for imparting nutrition information.

- **Production of Vitamin A-Rich Foods** The project not only encouraged families to increase the consumption of vitamin A-rich foods but assisted families in producing and learning to prepare the new vegetables. The project helped provide technical agricultural assistance to both schools and households and facilitated household access to seeds.

- **Primary School Program** The school activities consisted of daily distribution of vitamin A-fortified milk, vegetable gardening, and nutrition education sessions.

- **Integration of Vitamin A Activities** Vitamin A activities were integrated into an existing child survival project. In addition, all activities were integrated into and reinforced existing community structures (mothers' clubs and schools) and thereby did not require the creation of new structures.

Project Title	Caruaru Vitamin A Program	**Brazil**
Implementing Agency	Nutrition Department, Universidade Federal de Pernambuco (UFPE), and the Municipal Secretary of Health, Caruaru	
Funding Agencies	Numerous national and international agencies, including PAHO, WHO, IVACG, NIH, and Sight and Life	
Dates	"As long as needed"	
Cost	Unknown	

Project Objectives

(1) To integrate VAC distribution into a government vaccination program
(2) To identify local vitamin A-rich foods and encourage their consumption through nutrition education at the community level

Formative Research

None is reported.

Baseline Data Collection

Baseline data were collected from target group children on serum retinol levels, relative dose response (RDR), and anthropometrical parameters; complementary data were collected on housing, sanitation, alimentary habits, dietary intake, and mothers' nutrition knowledge.

Target Groups

All preschool-age children, mothers, administrators, and policy makers

Communications Strategy

The primary communications strategy was to increase the awareness among local public authorities of the vitamin A problem and to obtain the support of the authorities for the project. VACs were distributed at the same time that vaccinations were administered. Communities were informed of and motivated to bring their children for VAC distribution through community-level meetings with community leaders and mothers. Nutrition education was included in the community meetings, although somewhat informally. No explicit media strategy was developed, although radio and television did collaborate in publicizing the activities. Efforts are currently underway to develop and implement a mass media promotion campaign.

Training

The program developed no special training strategy but conducted seminars with health workers to orient them to the new activity.

Nutrition Messages

The project did not develop special messages but emphasized the need for vitamin A as insurance against nutritional blindness and the importance of VACs.

Evaluation

It was reported that 100 percent of the children who participated in the VAC distribution program showed improvements in vitamin A levels as measured by serum retinol levels, RDR, and clinical parameters. Evaluation was carried out at 1.5, 6.5, 11.5, and 18.5 months after the first round of capsule distribution. Random sampling was used in all cases.

Conclusions and Lessons Learned

- **Integration of VAC and Immunization Programs** The strategy used in the project, as recommended by WHO, integrated VAC and immunization activities, was deemed sound and cost-effective, and used existing staff and organizational structures.

- **Political Support and Community Involvement** The project documents stated, "Political backup and community involvement are crucial to the success of the program." Further, inconspicuous university participation was effective.

- **Communications Strategy** Interpersonal communications strategies were used to muster support for the project activities at the administrative and community levels. The project made no explicit use of the mass media, although the press and radio did publicize VAC. While no information on the budget was available, the overall effort appears to have been particularly low-cost.

Project Title	Vitamin A Intervention Project	**Guatemala**
Implementing Agency	Guatemala National Committee for the Blind and Deaf/Medical Division	
Funding Agency	International Eye Foundation	
Dates	November 1987-May 1990	
Cost	Unknown	

Project Objective To improve the vitamin A nutritional status of rural children under five years of age

Target Groups School-age siblings of preschool children, classroom teachers, and mothers of preschool children

Formative Research The project did not carry out qualitative data collection before undertaking development of the education interventions

Baseline Data Collection The only apparent baseline data pertained to serum retinol levels in preschool children

Program Strategy Three activities were organized through the schools: the development and distribution of NutriAtol (vitamin A-enriched post diarrheal refeeding food) to mothers and siblings of preschool children; nutrition education on the use of NutriAtol; and health education on the use of ORS. Promoters who were employed and trained for these activities coordinated the several efforts.

Communications Channels and Activities According to the project document, nonformal, small-group education sessions were held. A university art department developed educational posters.

Conclusions and Lessons Learned

- **Program Strategy** The project was based on the innovative use of the rural school system for delivering services to preschool children.
- **Training** The mid-term evaluation reported that supervision of the promoters, key actors in the project, was sporadic. Regular supervision is important to the effectiveness of promoters and all school-based activities.
- **Formative Research** No qualitative data were collected from the target groups before developing the education strategy. A university art department was engaged to prepare educational posters. The preparation of effective educational materials requires preliminary qualitative data collection, careful development of concepts and images, and pretesting with the target population. These important steps do not appear to have been followed.
- **Monitoring and Evaluation** The main purpose of a management information system (MIS) should be to assist program managers in making decisions about program implementation. From the available

information, it appears that the MIS was overly sophisticated and, at the same time, did not provide sufficient process data on the implementation of program activities.

Sources of Information

Herrera, M.G. "Mid-Term Evaluation, Vitamin A Intervention Project, Guatemala."

Solomons, N.W. Memorandum to IVACG regarding Vitamin A Intervention Project Proposal. Guatemala, October 24, 1987.

Project Title	Dharavi Xerophthalmia Project, Program for the Prevention of Blinding Malnutrition in Children	**India**
Implementing Agency	NAB Abdulla Fazalbhoy Centre for Eye Care	
Funding Agency	Operation Eyesight Universal; Royal Commonwealth Society for the Blind (RCSB)	
Dates	1982-1986	
Cost	Unknown	

Project Objectives

(1) To improve the health and nutritional status of children under five years of age and women 15 to 45 years of age
(2) To improve mothers' knowledge of child care
(3) To reduce xerophthalmia in children under five years of age
(4) To reduce malnutrition in children and women through nutrition education
(5) To raise women's status through literacy classes and income-generating schemes
(6) To increase the availability, accessibility, and acceptability of the project by employing a community-based approach with community health workers
(7) To increase awareness of xerophthalmia and motivate communities to take preventive actions
(8) To improve environmental health through community participation and self-help efforts

Target Groups

Mothers of children under six in seven colonies in the slums of Dharavi

Formative Research

Apparently the project collected no qualitative formative data on nutrition-related beliefs and practices.

Baseline Data Collection

The project collected quantitative data based on mothers' knowledge of high-priority child health interventions, prevalence of xerophthalmia, nutritional status of children, and vaccination coverage.

Project Strategies

The project organized both multifaceted primary health care (PHC) and social activities to motivate communities to participate in program activities. In terms of educational/communications activities, the project organized gardening demonstrations and competitions and interpersonal communications activities, including cooking demonstrations. In the follow-up project, tape cassettes and tin posters with health education messages were used with women's groups.

Integrated Primary Health Care Activities

Project activities included vaccinations, deworming, VAC, gardening, health/nutrition education, growth monitoring, and eye examinations.

Increased Access to Vitamin A-Rich Foods

To increase women's access to GLVs, vegetable vendors were encouraged to sell more GLVs, income-generating activities were organized with women, women were encouraged to grow GLVs in small pots, and a demonstration

garden was established at the supplementary feeding center maintained by community women.

Health/Nutrition Education

Key health educators included project staff, community health workers, child volunteers, adolescent girls and youth groups, mothers, and other local leaders. Health education activities extended to lessons at supplementary feeding centers established by the project, nutrition talks and cooking demonstrations held in the community with women's groups, health awareness classes on different child care topics (two hours a day for three days), and training of child volunteers (ages eight to 14) in child and environmental health.

It was reported that entrenched traditional beliefs constituted severe constraints to the acceptability of child health interventions. To attempt to overcome these constraints, messages were developed that suggested God's blessing for the interventions.

Social Activities

Various recreational, cultural, and sports activities were organized in conjunction with health/medical activities.

Training

The different groups of health educators (listed above) were all trained in different child health topics. Training was conducted with simple, locally prepared materials such as flannel graphs and posters. Trainees learned to role play and to use masks and puppets.

Community Involvement

It was reported that, to implement the PHC project activities, it was necessary to elicit the active participation of various community groups.

Evaluation

End-of-project data revealed quantitative increases in mothers' knowledge of different child health practices, increased immunization coverage, a decrease in eye diseases, and a decrease in malnutrition.

Conclusions and Lessons Learned

- **Multipronged and Integrated Vitamin A Strategy** The project strategy combined both long- and short-term approaches to improving vitamin A status, VAC distribution, vitamin A/nutrition education, and access to GLVs. Furthermore, vitamin A strategies were integrated into the comprehensive community health and social program. An end-of-project document stated, "To bring the xerophthalmia problem in control, what is required is not implementation of vitamin A prophylaxis program in isolation but a coordinated PHC approach for community development with active community participation."

- **Baseline Data Collection** Quantitative survey data were collected on various health and nutrition indicators as well as on mothers' knowledge of various child health problems and interventions, including vitamin A/nutrition. Dietary intake data were not collected but would have allowed an end-of-project assessment of changes in intake of vitamin A-rich foods.

- **Formative Qualitative Research** No qualitative data on nutrition beliefs and practices were collected; however, it appears that these factors were taken into consideration in the development of the

education strategy. Nevertheless, systematic data of this type would have been beneficial for program development.

- **Nutrition Education Strategy** The nutrition education strategy was based exclusively on the use of interpersonal communications activities with community groups. The project was committed to simple and practical educational activities such as gardening and cooking demonstrations, role plays using puppets and masks, nutrition talks, and discussions. The strategy was to identify and train community and women leaders and adolescents to serve as formal/informal nutrition educators and as supporters of the PHC activities.

- **Community Involvement** Project documents reported that community participation was essential for the implementation of project activities. A community development approach was used in the identification and training of a variety local human resources (community and women leaders and groups, adolescent volunteers) to serve as formal/informal health educators. In addition, by combining health activities with cultural and recreational activities, the project increased community motivation to participate. Such an approach can lead to changes in community norms, which, in turn, can influence individual behavior.

  The importance of community involvement and ownership is expressed in a project summary. "All of these activities have resulted in better rapport with the community and women's groups have shown their willingness to run the project. The continuation of the intervention with the community initiative creates more health awareness and helps in changing their habits."

- **Evaluation** The final evaluation showed increases in mothers' knowledge of different child health practices and in immunization coverage and decreases in eye diseases and malnutrition. Data evidently were not collected on the outcome of the gardening activities (including amounts and use of GLV production) and on changes in consumption of GLVs. Such additional data would have been useful.

  Note: The Royal Society for the Blind in India supports a number of projects, including the Dharavi project, intended to decrease xerophthalmia. In the other projects, the strategies have been similar in terms of the following: the integration of vitamin A activities into comprehensive PHC strategies; promotion of education and GLV production; a community development approach that involves community groups and leaders, including women community leaders called "link workers"; and use of simple, project-produced educational materials. In general, the projects have emphasized the use of simple community-level communications activities and materials. It is interesting that the Andra Pradesh project incorporates health/nutrition messages into two traditional forms of communication: "Bhura Katha" or traveling mendicants who sing songs on mythology and philosophies of life and "Arogya Avadani" or the art of answering questions in couplets in public forums. Entertainment is provided to villagers at the same time that nutrition/health messages are diffused.

Project Title	Integrated Child Development Services (ICDS) (part of the Training Research in Nutrition-Health Education for the Field Functionaries of ICDS Scheme)	**India** **(Madras State)**
Implementing Agency	University Department of Foods and Nutrition, M.S. University, Gujarat	
Dates	Two years	
Cost	Unknown	

Very limited documentation was available on this project.

Project Goal

To prepare a set of integrated nutrition-health education modules for use in the ICDS Scheme

Project Objectives

(1) To increase use of vitamin A syrup from Anganwadi
(2) To increase consumption of vegetables high in vitamin A

Target Audience

Pregnant or lactating women 15 to 45 years of age with children aged one to three years

Communications Strategy

The strategy relied exclusively on interpersonal communications activities at the community level and consisted of participatory teaching-learning methodologies such as role plays and discussions that used large black and white illustrations. Anganwadi village workers (AVW) carried out the activities. The educational messages addressed a variety of maternal and child nutrition topics. The messages that specifically focused on vitamin A-related issues discussed the danger and prevention of night blindness and blindness and the importance of consumption of GLVs in different recipes.

Monitoring and Evaluation

It was reported that process and impact evaluations were to be carried out, but no documentation on these activities was available.

Conclusions and Lessons Learned

- **Target Groups** The program focused on mothers of young children, although the entire community was expected to participate in the different community-level activities.
- **Community Involvement** ICDS elicited community participation by creating awareness of the young child's needs, by involving the community in planning activities, and by promoting program activities and the notion that program services are effective through adoption of better child care practices.
- **Anganwadi Village Workers** The AVWs were at the heart of the education strategy. Their effectiveness was related to the fact that they were chosen by other women members of the village population. Further, they participated in a three-month, hands-on, competence-based training program as well as periodic retraining and were regularly supervised. This experience suggested that village-level workers can be effective if they are sufficiently trained and supported.
- **Evaluation** No evaluation data were available.

Project Title	Methods for Nutrition Education with Special Reference to Vitamin A Deficiency (Hyderabad Project)	**India**
Implementing Agency	National Institute of Nutrition, Indian Council of Medical Research	
Funding Agency	UNICEF	
Dates	1988 (16 weeks)	
Cost	Unknown	

Very limited documentation was available on this project.

Baseline Survey

A random sample survey evaluated knowledge of signs and causes of nutrition-related eye diseases, vitamin A prophylaxis, and the importance of GLVs and YFs.

Communications Strategy

The strategy consisted of a 16-week educational campaign that was carried out in 23 villages. It relied primarily on the mass media through posters, pamphlets, calendars, slide stories used in the community and on television, three films, and radio talks by local vitamin A authorities. In addition, a local form of folk media that involves story telling (Burrakatha) was used.

"Burrakatha" is a traditional form of communications that uses stories usually based on religious themes. It is an art form that is reported to involve the community totally in an often-comical question-and-answer dialogue. In one of the stories developed by the project, the hero had very sharp, bright eyes due to the nutritious foods eaten by his mother during pregnancy and after he was born. He advised his pregnant wife to do the same.

Communications Messages

The messages in the different media addressed nutritional blindness and its prevention, the importance of eating GLVs and YFs, and preparation of GLVs.

Evaluation

Following the communications campaign, the baseline survey was repeated and showed improvements in knowledge of signs and causes of nutrition-related eye diseases, vitamin A prophylaxis, and the importance of GLVs and YFs.

Conclusions and Lessons Learned

- **Baseline Data Collection** The baseline survey collected quantitative data on vitamin A-related knowledge. Because data on dietary intake were not collected, an accurate assessment of the impact of the campaign on nutrition practices could not be conducted following the campaign.

- **Communications Strategy** The communications strategy consisted mainly of the use of different mass media activities, although some traditional media were involved. It has been shown that, while the mass media can provide information, they cannot bring about the desired changes in behavior. The project activities were organized in a campaign format that consisted of 16 weeks of various communications activities. Given the extreme difficulty of bringing about changes in nutrition practices, short-term communications campaigns are not believed to be sufficient to promote needed change; however, they can be useful when combined with more sustained activities.

- **Evaluation** Pre- and post-KAP survey data allowed the project implementors to conclude that the campaign resulted in changes in vitamin A-related awareness and increased knowledge. While these changes could be assumed from the survey data, it was not possible to conclude that changes produced improved nutrition practices.

Project Title	Tamil Nadu Integrated Nutrition Project	**India**
Implementing Agency	World Bank	
Funding Agency	World Bank	
Dates	1980-1986	
Cost	Unknown	

Project Goal

To increase the efficiency, coverage, and impact of the state's nutrition efforts

Nutrition Objectives

(1) To monitor regularly the nutrition status of children aged six to 36 months
(2) To rehabilitate malnourished children through short-term food supplementation
(3) To provide prophylaxis against specific nutrient deficiencies, including vitamin A
(4) To improve home feeding practices through community education
(5) To provide food supplementation to at-risk women during pregnancy and lactation
(6) To refine the effectiveness of nutrition education activities through nutrition education, monitoring, and evaluation

Target Groups

Children aged six to 36 months, pregnant and nursing women, and older preschool children in Tamil Nadu state

Project Components

The project was an integrated PHC health and nutrition project. The four project components were nutrition, health, communications/education, and monitoring and evaluation.

Nutrition Strategy

The nutrition activities included monthly baby weighing and nutritional surveillance, food supplementation for at-risk children, rehabilitation of malnourished children, ORS and VAC distribution, deworming, and nutrition education. In each of the 9,000 villages in the project area, a Community Nutrition Centre (CNC) was set up and staffed by a Community Nutrition Worker. Four types of communications activities were implemented: training support, staff development and coordination, mass communications, and interpersonal communications. The community-oriented communications activities included films, tin boards and posters, wall paintings, folk media, cooking demonstrations, and other types of group education sessions.

Community Nutrition Workers (CNWs)

The pivotal agent was the Community Nutrition Worker. She was a villager selected by the other women, and had a healthy baby of her own. The 9,000 CNWs (one in each village) received 60 days of initial training and periodic refresher training and were supervised twice a month (one supervisor per 10 CNWs). Each CNW organized groups of mothers called Women's Working Groups that acted as motivators for other villagers.

Evaluation

A mid-term evaluation conducted in June 1984 revealed improvements in the nutrition status of children of all ages in the project areas except infants aged seven to 12 months, decreases in severe malnutrition, decreased IMR, increased immunization coverage, and increased administration of tetanus toxoid to pregnant women. The disappointing results for children aged seven to 12 months were

reportedly due to the project's insufficient emphasis on improving deep-rooted weaning practices. This weakness was to be corrected in the latter half of the project.

Project Costs It was reported that the project was less expensive than other nutrition projects in the state but nevertheless cost $10+ per child per year.

Conclusions and Lessons Learned

- **Integrated MCH/PHC Project** All health and nutrition activities for children and mothers were integrated into one package of services delivered mainly at the village level and thus were easily accessible to women. Project documents concluded that "it is possible to achieve commendable results by integrating nutrition and health services."

- **Education/Communications Activities** The Community Nutrition Workers organized and facilitated the educational activities, all of which were implemented by the Women's Working Groups. Communications was mainly carried out through interpersonal channels between the respected CNW and the women's groups as well as informally between the group members and others in the community. The communications component emphasized the development of relationships between community women. The community-level activities primarily included cooking demonstrations, films, traditional media, and informal discussion and advising.

- **Community Nutrition Workers** One of the keys to project success was the use of CNWs, women from the same village who often had limited formal education but who received extensive training (60 days) and regular supervision (twice a month). It was concluded that, overall, the CNWs were highly effective in delivering village-level services. The CNWs' effectiveness is undoubtedly related, in part, to the training and supervision they received and to enhancing the capability of local women in the role of CNWs.

- **Evaluation** The mid-term evaluation suggested significantly greater improvements in the nutrition status of the project population compared to that of the control population. The final evaluation was not available for review.

Sources of Information

Heaver, R., "Improving Family Planning, Health and Nutrition Outreach in India: Experience from Some World Bank-Assisted Programs." World Bank Discussion Paper No. 59. Washington, D.C.: The World Bank, 1989.

Project Title	The 20 Pot or Daily Greene Program	**India**
Implementing Agency	Institute of Child Health and Hospital for Children	(Madras State)
Funding Agency	Unknown	
Dates	June 1980	
Cost	Unknown	

Project Goal/Objectives

(1) To impart nutrition knowledge through practical demonstrations
(2) To inculcate improved nutrition habits in the formative years

Target Group

Children aged five to 12 years in 10 elementary schools, three orphanages, one PHC centre, and one village in and around Madras city

Education Strategy

The strategy focused on educating children to promote changes in nutrition knowledge and habits at an early age; other community members were involved in the project activities as well. First, children were taught about vitamin A-related eye diseases and the need for increased consumption of certain vitamin A-rich foods. Second, they observed the planting and growing of locally available GLVs in 20 ordinary earthen pots, empty tins, or plots. Children were then involved in transplanting the small plants to other available containers and hence continually multiplied cultivation. Children were also involved in cooking demonstrations with the harvested GLVs. With the wider community (health personnel, teachers, students, families, and community leaders), the project organized Leafy Vegetable Days and featured a children's parade, participatory demonstrations of GLV cooking preparations, and distribution of cards containing information on GLV nutritive values and recipes.

Nutrition Messages

The nutrition message promoted increased production and consumption of available but little-consumed GLVs.

Evaluation

No report of quantitative data collected for evaluation was found, but project documents reported sustained enthusiasm and cooperation among the children involved in the project activities and easy acceptance of the vitamin A-rich dishes.

Conclusions and Lessons Learned

- **Production of GLVs** This small project focused on both the production and consumption of locally grown GLVs through practical, inexpensive, hands-on gardening and cooking experiences. These activities were reinforced with educational lessons. Emphasis was clearly on the practical aspects of increasing vitamin A consumption and only secondarily on the classroom teaching of nutrition concepts.

- **Communications Strategy** The project emphasized community-level activities by using locally available human and material resources. Gardening, cooking, and educational activities were organized for school children. Communitywide Leafy Vegetable Days were organized as social events and promoted the children's vitamin A activities. These activities were inexpensive and depended on the identification and organization of local human and material resources.

- **Evaluation** The evaluation data found in the available documents are anecdotal. Systematically collected baseline and end-of-project evaluation data on project outcomes would have been useful.

Project Title	Reinforcement of Integrated Child Development Services (ICDS)	**India**
Implementing Agency	Government of Karnataka and CARE	(Karnataka State)
Funding Agency	Government of India and CARE	
Dates	July 1990-June 1991	
Cost	$11,500 (Vitamin A component only)	

This project is part of the larger ICDS Scheme underway in Karnataka.

Project Goal

To reduce blindness associated with vitamin A deficiency

Objectives

(1) To increase community awareness of vitamin A deficiency
(2) To increase community participation in GOI vitamin A program
(3) To increase consumption of locally available food rich in vitamin A
(4) To test the efficacy of different educational materials and methodologies for educating mothers

Target Groups

Children under three years old and pregnant and lactating women in Karnataka

Formative Data Collection

Qualitative data on growth promotion, vitamin A, and immunizations were collected through focus group interviews. Results were used to develop educational materials.

Baseline Data Collection

A KAP survey on the causes and prevention of vitamin A deficiency was carried out in the project area and was repeated at the end of the project. No dietary consumption data were collected.

Project Strategy

The government ICDS Scheme provides integrated child health services, including supplementary nutrition, immunizations, health check-ups, preschool education, ORS, vitamin A, growth surveillance, and nutrition and health education. This project focuses on strengthening the vitamin A component of the larger Maternal and Child Health (MCH) program through educational activities.

Education Strategy

The project reinforced the ICDS interpersonal communications strategy. At the heart of this strategy was the Anganwadi worker chosen by the village women. Over time, she established rapport with small groups of women (10 to 12 women per group) and conducted periodic sessions with the women at the village level.

Training

ICDS supervisors received special training in vitamin A and subsequently trained the existing village-level Angawadi workers (AW). Each supervisor was charged with providing initial and semiannual refresher training to the 10 AWs for whom he/she was responsible. The AWs then trained/educated groups of village women (10 to 12 women per group) as they did for the other MCH program components.

Community Involvement The project activities were introduced to the whole community during a community meeting organized with the village leaders.

Testing of Different Education Approaches The project developed a scheme for preparing different types of educational materials, curricula, and methods and for evaluating their relative effectiveness among groups of women. One of the objectives was to evaluate the impact of educational activities that addressed either a single child health intervention or an integrated series of child health interventions.

Evaluation The end-of-project evaluation repeated the KAP survey to measure changes in knowledge related to vitamin A deficiency, increases in community participation in the government vitamin A program, and increases in the community consumption of locally available vitamin A-rich foods. Available documentation did not describe the methodologies used for the latter components of the evaluation.

Conclusions and Lessons Learned

- **Integrated Child Health Activities** The vitamin A activities in the program were but one component of a comprehensive system for providing child health services.
- **Baseline Data Collection** A preliminary KAP survey was carried out with mothers and was repeated at the end of the project. The reliability of self-reported nutrition behavior from a KAP survey is questionable. It would have been judicious to have also collected pre- and postdietary intake data to evaluate accurately the project's impact on vitamin A consumption.
- **Education Strategy** The education strategy consisted of interpersonal communications activities in the form of periodic informal education sessions with groups of village women. The project strategy was based on several of the principles of effective nutrition education, including relevance of local change agents as communicators, working with groups to attempt a change in group norms, and ensuring the support of community leaders for educational activities.
- **Community Involvement** In the ICDS programs, a preliminary step to launching community activities involved eliciting the support of community leaders whose input was subsequently sought in planning those activities. The main responsibility for implementing the community activities rested with the community-chosen AW.
- **Evaluation** No project evaluation data were available.

Project Title	Rovita-Child Survival II	**Indonesia**
Implementing Agencies	MOH, Universities of Diponegoro and Indonesia, HKI, AED/HEALTHCOM	
Funding Agency	USAID, HKI, UNICEF	
Dates	September 1986-August 1990	
Cost	$726,000 or $800,000 (actual amount unclear, different sets of figures found in different documents)	

Project Objectives

(1) To improve VAC distribution and coverage for children one to five years old

(2) To improve case management of diarrheal disease and distribution of ORS

(3) To apply social marketing techniques to achieve the first two objectives

(4) To measure change in incidence and severity of diarrhea in small cohort of children before and after VAC supplementation

Target Groups

In order of importance, the target groups were children under age five, their mothers, ministry and volunteer health personnel, husbands, and community leaders. The project took place in Demak and Jepara in Central Java province.

Formative Research

An ethnographic study of mothers, community health volunteers (*kader*), village leaders, retailers, and health personnel was carried out by a team composed primarily of academicians from the University of Diponegoro. Audience research was conducted to determine literacy, media use/ownership, and media listening behavior.

Baseline Data Collection

The Annenberg School of Communications (University of Pennsylvania) assisted in carrying out a baseline KAP survey of mothers on ORT and vitamin A. This survey was repeated one year later. A quantitative survey on VAC and ORS distribution was carried out with mothers and health personnel. A three-village census was conducted as a basis for the morbidity study.

Communications Strategy

The objective of the communications strategy was to mobilize mothers to visit the health posts for ORT advice and for semiannual, month-long programs of VAC and ORS distribution (February and August). The social marketing strategy emphasized modern mass media (radio and print) but also included interpersonal communications by training 10,000 community health volunteers (mostly mothers) in ORT and VAC administration. Communications materials included radio spots, cloth banners, fliers, point-of-purchase plastic bags imprinted with an ORT message, and ORT and vitamin A manuals for the volunteers. The messages were the simple "where" and "when" of VAC and ORS distribution and were identical for all media.

Community Involvement

Over 1,000 community members were interviewed during the initial data collection phase. In addition, 10,000 *kader* were trained to counsel mothers on oral rehydration therapy through a monthly health post and home visits.

The *kader* were also trained to administer vitamin A capsules to children during the months of February and August. The final evaluation, however, did not discuss the activities of the *kader*. Similarly, 500 community leaders and village ORS retailers were trained. Leaders were trained in the importance of ORT and VAC services available through the village health post system; retailers were instructed in the sale and proper use of ORS. The evaluation did not, however, discuss any subsequent community-level activities carried out by leaders and retailers. The mid-term evaluation stated that community level work required large and sustained investments of manpower to bring about behavior change.

Institutional Development

The project was carried out in close collaboration with the Ministry of Health (MOH). Rovita staff were integrated into the MOH or university. Considerable effort was dedicated to improving MOH management systems related to ORS and VAC distribution. University collaborators expanded their skills in research design strategies and computerized data management. MOH and university assistance strengthened project management skills. The project also led to collaboration with firms in the Indonesian private sector, including advertising and market research firms, ORS manufacturers, and printing firms.

Training and Follow-Up

Vitamin A and ORS *kader* training modules that used a participatory methodology and *kader* reference manuals were developed and applied to train MOH personnel and 10,000 village *kader*. Refresher training of *kader* was conducted one year later, but apparently there was no other system for long-term, periodic follow-up. Following their training, the *kader* were expected to register all target-group children, assist with semiannual campaign activities at the health posts, and follow up on registered children who were not brought to health posts. Problems were encountered in maintaining the motivation of these unpaid volunteers. Their registration of children and follow-up at the household level was conducted with "varying success."

Monitoring

A multifaceted system was developed to monitor social marketing interventions, ORS and VAC distribution, diarrhea case management, and mothers' health post attendance. The resultant information was used at regular steering committee meetings to develop and modify work plans.

Evaluation

A second KAP study of 800 mothers was conducted to measure the effect of the project's first year of interventions on capsule coverage and diarrheal disease management practices. This study, based on mothers' self-reporting, revealed significant increases in capsule coverage as compared to the control area. It also showed improvements in diarrheal disease management in both project and control areas. A third KAP survey in 1990 that focused only on capsule distribution showed even greater increases in capsules consumed by eligible children.

Conclusions and Lessons Learned

- **Transfer of Social Marketing Methodology** An important project accomplishment was that MOH personnel acquired the knowledge and skills necessary for developing social marketing strategies and

materials. They learned how to carry out formative research, message development, materials testing and pretesting, and monitoring as well as how to develop materials from a consumer perspective.

- **Integration of Project into MOH Structures** As a result of concerted and apparently successful effort, all project staff planning, activities, evaluation, and reporting were integrated into MOH structures and programs. Similarly, the attempt to institutionalize the project meant that MOH field officers were involved from the inception of all project activities. Despite some shortcomings, the integrated approach was beneficial in terms of strengthening ministry skills and systems and coordinating project activities with ministry programs.

- **Strengthening of HIS Systems** The project provided considerable assistance to the MOH to strengthen its HIS for vitamin A and ORT/diarrheal disease activities. Feedback from data collection was used as a management tool through periodic steering committee meetings.

- **Formative Research** The ethnographic study based on in-depth interviews provided valuable qualitative information on ORT/vitamin A knowledge and practices. The objective of the audience research was to identify the most appropriate communications channels. Based on questions asked about all potential media (including traditional and mass media), program managers selected a mix of mass media and interpersonal strategies (focused on *kader*) in light of the project's level of funding and human resources.

- **Communications Strategy** The social marketing strategy focused on the use of the mass media (radio, banners), targeted media (fliers, plastic bags, direct mail), and interpersonal communications. Seven private radio stations were used because they reached mothers far better than the government radio station. The banners ultimately proved impractical for use on a large scale due to production problems and limited impact, even though one banner was displayed in each village. The *kader*, health personnel, some retailers, and some community members carried out interpersonal communications activities, but these activities received less attention in terms of effort and resources and were reportedly less effective compared to the mass media component. Indigenous community communications channels were neither identified nor used. The uneven efforts of the 10,000 trained *kader* caused problems; some worked very hard for the program and others did little.

- **Communications Messages** The messages used in the communications strategy dealt exclusively with the need for and distribution of VAC and ORT and how to use ORS properly. Because other projects were already promoting vitamin A-rich foods, the MOH asked this project to focus its limited resources on capsules--a focus that included heightening awareness of the term "vitamin A" for future MOH work on vitamin A-rich foods.

- **Use of Radio** While free public radio broadcasting time was available to the project, listenership research showed that private radio stations were the best means to reach the target audience. Radio spots were produced inexpensively by staff of a local FM radio station. The project also devised a creative and inexpensive approach to monitoring radio broadcasts by recruiting a small number of village mothers to listen and record broadcasting times and messages.

- **Training and Follow-up of Village *Kader*** ORT and vitamin A training manuals were developed, and approximately 10,000 *kader* received three days of initial training and one day of refresher training one year later. Several reports stated that *kader* skills were weak. Compared to other programs that successfully used community volunteers, the project's formal training was of short duration. The available documents made no mention of periodic supervision or follow-up of the *kader*, which was the responsibility of the MOH. Experience has shown that supervision of village volunteers on a regular basis contributes significantly to volunteers' effectiveness. The project used completion of

training as a measure of *kader* skills in ORT and vitamin A, but performance during training is not a valid indicator of on-the-job performance.

- **Motivation of *Kader*** Poor *kader* performance was observed and a study of the problem carried out. The study revealed low motivation among *kader* largely due to their unpaid status and their perception that their role was not recognized by their community and its leaders. To improve this situation in the absence of a strong MOH supervisory structure, the project devised a strategy to use mass media (radio spots and mailings to *kader* and village leaders) to increase *kader* motivation. Specifically, the strategy called for stimulating community awareness of and person-to-person praise for volunteers. Direct interpersonal communications might have been more effective, but they were neither economically nor logistically feasible.

- **Community Involvement** The MOH recruited 10,000 community members through village leaders. The project then trained the community members as community health volunteers. These volunteers were overwhelmingly mothers aged 18 to 45 years who had at least basic literacy skills. Community leaders were also trained, but their subsequent role was not clear. In addition, the available project documents suggested that the project did not aggressively pursue substantive involvement of the community in developing or implementing specific community-level activities. Further, limited resources did not permit regular follow-up with leaders to ensure that community activities were actually carried out. MOH supervision of *kader* was also weak. In its later stages, the project began to experiment with involving village heads in assuming more responsibility for informing mothers of the VAC program and for supporting *kader*; however, even the small pilot effort proved extremely time-consuming for the Rovita staff.

- **Monitoring** Considerable effort was devoted to strengthening the MOH systems for monitoring VAC and ORS distribution, coverage, and health center activities. It does not appear that the system included periodic monitoring of *kader*'s village-level registration, household ORT/VAC distribution, or educational activities.

- **Sustainability** The 1988 mid-term evaluation stated "Rovita is unlikely to be replicated with its several components, in its entirety." As an operations research project, Rovita was designed to help MOH try untested methods for increasing VAC consumption and ORT use. The MOH has disseminated the vitamin A and ORT training modules and *kader* manuals to all villages throughout Central Java province (pop. 28,000,000) and used the Rovita radio spots for provincewide broadcast. At the national level, the MOH decided to revamp its nationwide VAC program along the lines of the Rovita project by adopting the model of February and August VAC distribution months as supported by the mass media (radio, television) and interpersonal communications through *kader* and village leaders. MOH officials have used Rovita findings on *kader* performance and distribution problems to improve their national strategy.

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Project Title	Social Marketing of Vitamin A	**Indonesia**
Implementing Agency	Ministry of Health and Helen Keller International	(West Sumatra)
Funding Agency	USAID	
Dates	August 1986-September 1989	
Cost	$210,000	

Project Objectives

(1) To increase consumption of vitamin A-rich foods
(2) To increase supply and demand for VAC

Formative Research

Considerable time and resources were devoted to extensive formative research carried out by a local commercial advertising firm in collaboration with a local university. Focus groups were conducted with mothers, fathers, *kader* (local health volunteers), traditional midwives, health personnel, village chiefs, and religious leaders.

Baseline Data Collection

The baseline and end-of-project data collection consisted of KAP surveys and 24-hour dietary recall in both project and control areas.

Development of Communications Strategy

Manoff International was responsible for developing the messages, media plan, and materials; they collaborated with a local advertising agency. In the formative research, they identified certain resistance points to the increased consumption of vitamin A-rich foods. Messages were developed to present "creative solutions to overcome all resistances and blocks that can impede action." Messages reinforced mothers and their existing positive motivations, focusing on the need to consume certain vitamin A-rich foods without explicitly making the link to eye health. The proposed nutritional interventions were tested at the household level.

Communications Channels and Activities

The media plan emphasized the use of the mass media and, to a lesser extent, interpersonal communications. However, according to the final evaluation, "eventual implementation relied almost exclusively on the standard commercial marketing matrix of radio and point-of-sale" activities. The communications materials included radio minidramas, radio spots, a jingle sung by a local folk singer, posters, billboards, printed plastic bags for distribution by vegetable sellers, and counseling materials for health personnel.

Community Involvement

Village support was motivated through an action kit, direct mail, and meetings at the district health office.

Monitoring

Several implementation problems arose: the *kader* drop-out rate was 70 percent; *kader* were poorly motivated to counsel mothers; market medicine sellers did not continue promoting vitamin A; and only one-third of the radio spots were aired.

Evaluation

A major problem with the evaluation data was that the control area was to some extent exposed to the media campaign. The final KAP and dietary

recall data were unclear about the effectiveness of the project activities. In some cases, the changes in attitudes and knowledge in the project and control areas were of similar magnitude. In other cases, changes were greater in the project area or greater in the control area. Similarly, the 24-hour dietary recall data suggested that, in some cases, the desired changes were greater in the project area while, in other cases, they were greater in the control area. VAC distribution increased significantly in the project area and even more in the control area. Manoff International concluded that the unsatisfactory results stemmed from an insufficiently intensive communications campaign.

Conclusions and Lessons Learned

- **Campaign Messages** The messages used in the communications strategy were carefully developed and appropriately focused on simple, practical suggestions concerning the increased consumption of certain foods to ensure child health. Because mothers did not perceive blindness as a serious problem, the messages did not stress the relationship between vitamin A-rich foods and eye health.

- **Messages to Overcome Resistance Points** The assumption was made that creative campaign messages could overcome resistance points such as children's dislike for vegetables and the belief that vegetables cause diarrhea. Evidence suggests that mass media alone are unable to change nutrition behaviors and to encourage individuals to overcome deep-seated beliefs and attitudes. Nevertheless, the messages would have been extremely useful as a basis for participatory interpersonal communications activities that might have allowed mothers to discuss the proposed changes.

- **Responsibility for Campaign Development** Development of the messages, media plan, and materials was the responsibility of the Manoff consultants and a local advertising agency. This approach is probably an efficient way to accomplish the work and may strengthen private agencies' skills in social marketing. However, such approach neither contributes to building public sector institutional capabilities nor enhancing institutional commitment to a project. The inadequate management of activities during the implementation phase is probably partly attributable to the limited involvement of the MOH in the development of the communications strategy.

- **Pretesting of Materials** Careful pretesting of campaign materials revealed weaknesses; necessary revisions were made.

- **Use of Radio in the Campaign** The formative research revealed that only 25 percent of the target population was exposed to radio coverage. Nevertheless, the communications campaign emphasized the use of radio.

- **Access to Vitamin A-Rich Foods** The formative research stated that a significant constraint to increased vitamin A consumption was mothers' opinions that they did not have easy access to vegetables. The existence of vitamin A-rich foods in an area does not mean that households have easy access to them. The project did not address the issue of access; it assumed that the campaign messages would overcome this constraint.

- **Identification of Influential Communicators** The formative research reported that mothers considered health personnel, but not community leaders, to be reliable sources of information. The validity of these findings can be questioned; the respondents' answers might have been meant to please the interviewers and perhaps did not reflect mothers' true sentiments. Evaluations of the successful Indonesian family planning program have identified the programs' initial and close collaboration with community leaders (and their influence in modifying community norms) as one of the principal factors

in program success. This point is important in that the formative research data influenced the decision to work with health personnel rather than with indigenous leaders.

- **Community Involvement** During the formative phase of the project, data were collected from the community, and household trials were carried out to test the proposed nutritional practices. There was substantive input from the community. During the communications campaign, the community was expected to receive the campaign messages and practice the suggested behavior changes. The final evaluation does not mention any additional efforts to involve communities in the development or implementation of project activities beyond the formative phase.

- **Collaboration with the Ministry of Health** The vitamin A social marketing project was to be carried out in collaboration with the Ministry of Health. It is unclear from the available project documents and final evaluation that such collaboration was operationalized. The absence of close collaboration with the MOH may have contributed to the inadequate follow-up during the implementation of the communications campaigns. The focus of the project appears to have been the systematic development of the media campaign. Institutional and community development were not emphasized.

- **Collaboration with Vegetable Sellers** An interesting strategy was to work with market vegetable sellers to encourage them to give nutrition advice to mothers. Reports show, however, that their motivation to collaborate was not sustained. No detailed information on the training or supervision of these sellers was found. Sustained support, encouragement, and involvement of such collaborators in carrying out project activities is required if their ongoing participation is to be ensured.

- **Use of Village *Kader*** The project attempted to use the existing village *kader* as interpersonal communicators, but the results were disappointing. *Kader* were not carefully selected and project support for them was highly limited. *Kader* received only one day of training. Further, the project did not provide a regular scheme of supervision which, is necessary for ensuring the effectiveness of these workers.

- **Free Radio Broadcast Time** Even though the government radio stations agreed to broadcast messages for free, they often failed to respect the broadcasting schedules unless they were paid for the broadcasting time. Similar situations have been experienced in other countries.

- **Final Evaluation Results** The results of the final evaluation (dietary recall) do not suggest that the communications project had a significant impact on nutrition practices. The increases in VAC distribution were no greater in the project areas than in the control areas. The results may be traced to the communications strategy that was based on almost exclusive use of the mass media.

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Project Title	Vitamin A Project	**Malawi**
Implementing Agency	International Eye Foundation (IEF)	
Funding Agency	IEF and U.S.AID	
Dates	September 1989-August 1991	
Cost	$708,000	

Project Introduction

This three-year project was implemented in 45 villages in one region of Malawi and consisted primarily of VAC distribution, eye screening, and, to a lesser extent, the promotion of increased consumption of vitamin A-rich foods. The project was aimed at encouraging communities to take responsibility for promoting nutrition-related activities through collective self-help efforts that were believed to contribute to changing nutrition-related community norms. This philosophy was the basis for emphasizing community development in which the project worked with local leaders and volunteers to encourage them to take primary responsibility for organizing vitamin A-focused community rallies and the follow-up of children at risk. The project also aided in the development of strong collaboration with the Ministry of Health.

Project Goal

To improve infant and child health and survival through prevention of vitamin A deficiency, treatment of other eye diseases, and improved infant and child feeding practices

Project Objectives

(1) To provide semiannual vitamin A supplementation to children six months to six years of age
(2) To provide vitamin A supplementation to mothers within two months of delivery
(3) To improve infant and child feeding practices (with respect to vitamin A-rich and energy-dense foods)
(4) To provide eye examinations and treatment or referral for eye diseases in children under six years of age

These objectives were virtually all individual-level objectives. However, the project activities also included community-level and institutional-level change strategies.

Baseline/Formative Research

A baseline survey was conducted at the outset of the project and was repeated at the end. The survey was somewhat limited in scope, particularly regarding dietary practices, and should have collected more detailed information on the accessibility, seasonality, preparation, and feeding of vitamin A-rich foods. No qualitative formative data were collected on community attitudes and practices related to eye diseases and child feeding. However, focus group interviews were planned to assist in the development of messages and strategies.

Community and Institutional Target Groups

The two primary target groups were children aged six months to six years and women immediately after delivery. While not explicitly stated in the project documents, secondary target groups at the community level included

traditional leaders, political leaders, and the Village Health Promoters (VHPs). Secondary target groups at the institutional level included Home Craft Workers, Health Surveillance Assistants, and Ophthalmological Medical Assistants.

Vitamin A Program Strategy

The strategy consisted primarily of village rallies that offered eye screening, VAC distribution, vaccinations, cooking demonstrations, nutrition education sessions, singing, and dancing. In addition, VHPs provided follow-up home visits to children who missed the rally screening as well as weekly cooking demonstrations along with the CHWs. VHPs, Health Surveillance Assistants, and Ophthalmological Medical Assistants carried out and supervised these activities with the assistance of two Peace Corps volunteers who served on the project staff. It is noteworthy that the project developed nutrition messages for different age groups, advising use of locally available foods. These messages were adopted from "Nutrition Facts for Malawian Families," a small book published by the Inter-Ministerial Food and Nutrition Committee in 1990. The project was involved to only a limited extent in encouraging GLV production through seed distribution. The project staff hoped to expand this component of the project to help improve access to the foods that were to be encouraged in the nutrition education and cooking demonstrations but that were not readily available.

Communications Channels and Activities

The project activities focused almost exclusively on the use of interpersonal communications channels to mobilize community support for vitamin A/EPI activities that promote both VAC distribution and changes in nutrition practices. The project coordinator undertook a detailed approach to working with the local leaders. Systematic and sustained efforts were made to inform traditional leaders and political authorities about the project strategy and to involve them in the organization of project activities and mobilization of villagers. In addition, the various government extension agents and VHPs used interpersonal channels to educate mothers. Their use of visual aids was limited to a few posters produced by the MOH. Communications activities included songs developed and sung by groups of women, dances accompanied by songs, motivational speeches by the authorities, village bands that composed their own health/nutrition songs, cooking demonstrations for which mothers contributed the ingredients, and home visits by the VHPs. Because the community provided the resources, the communications activities were carried out at virtually no cost to the project.

Community Development

According to the project coordinator, the project aimed to have communities assume as much responsibility as possible for the vitamin A activities and thus emphasized nondirective community development. This approach was based primarily on working with local leaders and involved establishing confidence with them, informing them of project activities, and gradually encouraging them to take responsibility for organizing the rallies and follow-up activities. The project staff simply wrote to the village leaders to inform them of the date of the rally and the leaders took care of the rest. Another aspect of community involvement was the reporting of vitamin A screening results at community meetings to reinforce community participation in the screening and to encourage their continued involvement.

Integration of Vitamin A Activities

The project activities were integrated to some extent with other Maternal and Child Health (MCH) activities. At the rallies that were held every six months, vitamin A and EPI activities were carried out simultaneously. In terms of nutrition education, there was an attempt to combine vitamin A messages with other nutrition messages, although this effort could have been stronger. As stated above, the project envisioned efforts to support production of the recommended foods through more direct collaboration with the Ministry of Agriculture.

Supervision

A key to the success of the village-level activities was the regular supervision provided to all "extension workers" (OMAs, CHAs, and VHPs). Supervision consisted of both visits to the workers and periodic meetings that brought together workers from different areas. Community VHPs were visited at least once a month and frequently more often. The project coordinator insisted that this supervision, though costly, was critical for providing encouragement to the extension workers, checking their records, and identifying and solving any problems they encountered in carrying out project activities.

Monitoring

The VHPs kept data on all children in the target group and on VAC distribution, eye screening, and health education sessions. VAC coverage continued to increase since the project inception and, by late 1990, coverage reached 74 percent of the children in the 45 target villages. Further improvements in the monitoring system were anticipated with the introduction of a revised management information system that allowed for continuous monitoring of health information at the village level as well as periodic assessments based on qualitative studies and surveys. The system needed to be strengthened to permit follow-up children diagnosed with eye problems during the screening and subsequently referred to the health services.

Sustainability

Two aspects of the project contributed to the sustainability of the primary eye care activities: the close collaboration between the project staff and Ministry of Health personnel and the development of village PHC human infrastructure.

Evaluation

The mid-term evaluation of the project was planned for late 1990. The excellent monitoring data available on the VAC distribution and eye screening activities were useful in evaluating the level of accomplishment. Unfortunately, insufficient baseline data on dietary consumption limited accurate assessment of any changes in nutrition practices.

Conclusions and Lessons Learned

- **Baseline Research** Initial baseline data were not collected on dietary consumption patterns of vitamin A-rich foods. Such data are necessary to evaluate changes in nutrition practices during the project period.

- **Formative Research** Even though initial qualitative information was not collected on the sociocultural aspects of nutrition/vitamin A-related beliefs and practices, some attempts were made to fill this gap. Initial informal qualitative data collection on sociocultural patterns would have been

useful for developing educational messages and for sensitizing health and development workers to community perceptions and practices.

- **Community Development** The IEF vitamin A project followed a Child Survival Project implemented by IEF from 1985 to 1988. In concluding that the community- based activities did not receive sufficient attention, the final evaluation of the Child Survival Project provided several suggestions for strengthening the community component in future projects. Virtually all of those suggestions were taken into consideration in the design and implementation of the vitamin A project whose community orientation was perhaps its strongest aspect.

  The project emphasized community development by working closely with existing community leaders, encouraging the community to take as much responsibility as possible for organizing the village-level activities, and providing the minimal resources necessary. This approach contributed to the enthusiastic support of village leaders, used local resources judiciously, and thus enhanced the sustainability of this and similar health/nutrition activities. Possibilities for increasing community support for the VHPs were important for long-term sustainability.

- **Community Mobilization** The mobilization of communities for village rallies was methodical and effective in achieving high levels of community participation. It was propitious to promote other child health interventions at these events.

- **Communications Channels** The project primarily used traditional and interpersonal communications channels to develop community-level activities and to promote targeted nutrition/vitamin A-related practices. These channels involved influential community leaders in promoting VAC distribution and the consumption of GLVs; community media in the form of nutrition songs and dances developed by villagers and accompanied by village bands; and collaboration between community volunteers and outreach workers from different ministries at the community level. The strategy demonstrated a relatively inexpensive approach to using community resources and community management to promote community-level change. Other experiences suggest that strategies promoting changes in nutrition-related community norms may be more effective than those that aim to change individual behavior.

- **Nutrition Education Sessions** Sessions consisted of cooking demonstrations, nutrition talks, and sometimes role plays. In addition, other simple, participatory, nonformal education activities could have been developed by using the qualitative data collected on nutrition beliefs and practices.

- **Monitoring** A comprehensive but simple system for monitoring VAC distribution at the community level was developed and implemented largely by community-level workers. However, there was a need to strengthen the system for the follow-up of children with eye problems who required referral to the health services.

- **Supervision** Supervision of both the ministry personnel and community volunteers involved in project activities occurred at least once a month in the form of visits and meetings. The frequency of supervision contributed significantly to the quality of the activities carried out.

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Project Title	Family and Community Nutrition Promotion Program	**Malawi**
Implementing Agency	Save the Children Federation	
Funding Agency	Save the Children Federation and USAID	
Dates	September 1987-September 1990	
Cost	Unknown	

Project Introduction

Vitamin A-related activities were one small part of the larger Family and Community Nutrition Promotion Program carried out in two "impact areas" where Save the Children Federation (SCF) supported integrated community development activities. The emphasis on community development in project activities was integral to the goal of promoting improvements in family nutrition through sustainable community actions implemented by community members. Such actions should require minimal inputs from outside the community and should lead to increased production and consumption of nutritious foods. Project activities focused on gardening at the community and school levels in collaboration with community leaders, government field agents, and school teachers.

Project Objectives

(1) To conduct a survey of vitamin A and other nutritional deficiencies in the two project zones

(2) To establish a VAC distribution system through schools and clinics for children at risk, based on the results of the survey

(3) To improve mothers' knowledge of nutrition and nutritional disorders, increase referrals of malnourished children, and ultimately decrease the number of malnourished children through nutrition education activities with women's groups

(4) To increase the production and consumption of vitamin A-rich foods through the establishment of year-round vegetable gardening programs targeted to women's groups

(5) To increase primary school children's knowledge of nutrition, including vitamin A, through more and improved nutrition education in the primary school curriculum

(6) To train primary school teachers to identify nutritional deficiency disorders, particularly those related to vitamin A deficiency, and to refer affected children to health centers

(7) To increase the quantity and quality of school vegetable gardens in all assisted schools

The objectives were clearly stated in the project document and were relevant to the overall project goal of improving family and community nutrition. The objectives were particularly ambitious.

Baseline Research

At the outset of the project, a survey was conducted to assess the prevalence of xerophthalmia in one of the impact areas; the same survey was conducted in the other impact area at the mid-point of the project. No baseline data were collected on dietary intake of vitamin A in children. Similarly, no baseline data were collected for the gardening component.

Formative Research

No formative qualitative data were collected on nutrition-related knowledge, sociocultural beliefs, and practices of mothers.

Vitamin A Strategy Development

From the outset, the project emphasized the production of vegetables for income generation rather than for consumption. Vitamin A-rich foods were not specifically chosen or encouraged for production and consumption.

Community and Institutional Target Groups

At the community level, the target groups included women of mixed ages, female leaders, village headmen, male farmers, and school children. The project made no attempt to divide the groups of village women by age or child-rearing status. Instead, activities were organized around naturally occurring social units that included women of varied of ages. At the institutional level, target groups included community development assistants, school teachers, community health supervisors, and village health promoters.

Teaching Planning Skills

The project placed emphasis on teaching project collaborators how to plan their own activities. For example, the women's group leaders and primary school teachers learned discussion techniques and the basic steps in planning their respective activities through their participation in participative training sessions. Strengthening the planning skills of project collaborators at both the community and institutional levels supported the goal of sustainability.

Communications Channels and Activities

Project activities focused almost exclusively on the use of interpersonal communications channels. At the community level, support for the agriculture/ nutrition activities was cultivated among the formal leaders (village headmen) through frequent visits. Similarly, informal women leaders were identified and trained and received follow-up visits from both ministry field workers and project staff. In both cases, interpersonal communications from community leaders to other community members furthered project objectives.

Community Involvement

There was a concerted effort in all of the food production, home economics, and income-generating activities to involve the community in planning, implementing, and evaluating project activities. Women's group leaders were trained in straightforward, participatory training methods to help their groups plan, implement, and evaluate their own activities. Nevertheless, the ability of the women to use these skills with their groups varied considerably. Further, the follow-up of the groups was not always regular.

Integrated Approach

The project promoted improved nutritional status (including vitamin A) by encouraging agricultural production and income-generating activities and by offering nutrition education. Staff from the Ministries of Agriculture, Community Services, and Health collaborated closely.

Training

The project devoted considerable effort to training and follow-up for the community project collaborators, including women's and farmers' group leaders and teachers. Training included not only technical agriculture and nutrition but process skills such as activity planning, implementation, evaluation, leadership, and teaching. All initial and follow-up training was performed by a team of trainers who received extensive (five-week) training-of-trainers preparation. Training sessions were all based on principles of adult education and emphasized participatory learning activities.

Sustainability The community development approach sought to involve community leaders and groups as much as possible in planning and implementing their own activities. In all areas of project activity, project staff made an explicit attempt to design activities that could be sustained by the community. The revolving seed fund was an example of this approach.

Evaluation The final project evaluation conducted in September 1990 was a process evaluation. It was not possible to assess the impact of project activities due to the lack of appropriate baseline data. Some of the evaluation findings are included in the following section.

Conclusions and Lessons Learned

- **Baseline Research** The necessary baseline data on dietary consumption of vitamin A-rich foods and on gardening activities were not collected. Therefore, it was not possible to measure behavior changes related to project objectives.

- **Formative Research** No initial qualitative data were collected on the sociocultural aspects of vegetable production and consumption. Such information would have been useful in developing the gardening and education strategies and in sensitizing field workers to community perceptions and practices.

- **Community Development** The project emphasized community development to encourage community members to take responsibility for initiating the gardening activities and promoting consumption of GLVs. The community development approach relied on traditional communications channels (community leaders and social networks) to encourage community involvement and, ultimately, ownership of project activities. An effort to train community-level collaborators to plan, implement, and evaluate their own activities met variable success due to irregular follow-up and other management constraints.

- **Women's Groups** One project accomplishment was the creation, with the support of the Home Craft Extension workers, of women's groups in most of the project villages. The leaders of these groups received considerable training in gardening/vitamin A activities as well as in leadership skills and the basics of planning and implementing small projects. In some cases, the group leaders organized gardening and cooking activities with their groups on an ongoing basis. These groups could potentially be used as vehicles for other health/nutrition activities; however, their effectiveness depends on continuing supervision and support.

- **Revolving Seed Funds** The project's goal of initiating sustainable gardening activities led to the establishment of revolving seed funds in many of the villages. Community responsibility for the management of these funds was not as great as expected; apparently community groups require more training and follow-up.

- **Institutional Involvement** There was close collaboration between the project and the government field workers from the ministries of Community Development and Agriculture. Government field workers worked directly with the project on a full-time basis. This institutional collaboration should contribute to the sustainability of vitamin A activities.

- **Monitoring** The monitoring of project activities was weak. No system was developed to monitor each type of project activity to ensure prompt feedback on problems or modification of program strategy.

- **Evaluation** Because initial data collection did not include assessment of dietary intake, it was impossible to evaluate the precise impact of the project on the consumption of vitamin A-rich foods.

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Stan Jere, Child Survival Manager
George Kachere, Community Development Assistant
Mercy Kachere, Community Development Assistant
D. Kkapyepye, Health Projects Assistant
Eric Kuyewawa, Community Development Assistant
Doreen Lisimba, PSO/Health
Frank Mlotchwa, Program Manager
M. Mtekama, Health Projects Supervisor
Ndou, Sponsorship Assistant
Peter Nkhonjera, Assistant Director, Save the Children Federation
C. Sambani, Oil Project Officer
Jacques Wilmore, Director, Save the Children Federation, Malawi

Documents:

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Project Title	Macina Child Health Project (MCHP)/Communications for Vitamin A Project	**Mali**
Implementing Agency	Ministry Of Health (MOH)/CARE	
Funding Agency	USAID, CARE	
Dates	1986 - December 1989	
Cost	$951,034	

The Macina Child Health Project, initiated in 1986, included some vitamin A activities. A subproject, Communications for Vitamin A, was integrated into the MCHP in 1990.

Project Goal

To reduce infant and child morbidity and mortality

Project Objectives

(1) To immunize children under six years of age
(2) To immunize women 15 to 45 years of age
(3) To increase women's knowledge of diarrheal disease and ability to prepare and administer ORS
(4) To increase women's knowledge of proper weaning methods and appropriate diet during pregnancy and lactation
(5) To ensure participation of 50 percent of women aged 15 to 45 in educational sessions on prenatal care and safe delivery techniques
(6) To ensure participation of 30 percent of the villages in hygiene and sanitation, ORT, safe delivery, and EPI activities

Target Groups

Initially, the target groups were identified as children and mothers. As the project developed, it became clear that older women in the community exercise a great deal of influence over health/nutrition decision making. Accordingly, they were added to the list of target groups.

Baseline Data Collection

The MCHP began with extensive baseline research that included the collection of socioeconomic and demographic data. The available documentation made no mention of details on the methodologies used. For the vitamin A communications project, a KAP baseline study was to be carried out.

Formative Research

For the new vitamin A communications subproject, a rapid ethnographic assessment on maternal nutrition and infant feeding, including consumption of vitamin-A rich foods, was carried out in December 1989 with assistance from the Nutrition Communications Project. It included surveys of markets, focus groups, and in-depth interviews.

Project Components

The MCHP comprised five main integrated components: EPI; diarrheal disease control; hygiene and sanitation (latrines); nutrition (growth monitoring, weaning foods, vitamin A); and maternal health. The health project worked in close collaboration with two other parallel projects that provided services relevant to vitamin A concerns: the Agricultural

Development in Drought Zones Project (ADDZ), which was intended to increase food self-sufficiency, and the Macina Wells Project.

Communications/Education Strategy

The strategy was based almost exclusively on the use of interpersonal communications channels by health monitors. Regular educational sessions consisted of informal discussions, role plays, and demonstrations with small groups of women followed by individual home visits. The health monitors identified the topics for the educational sessions based on the interests or problems of each village. The suggestions made for improving nutrition practices were not theoretical but rather were directly tied to the parallel food production activities. Informal meetings between the health monitors and community leaders educated the leaders and elicited their support.

Community Involvement

Communities did not participate in designing the initial project but were deeply involved in deciding whether and how to implement different project activities. The final evaluation stated that the systems and activities were established and coordinated by local structures, committees, etc.

Training and Follow-Up

The subproject placed major emphasis on the training of health monitors. The monitors received a six-week initial training course that included technical content (EPI, CDD, nutrition) and stressed the process skills required to communicate effectively with communities: community mobilization, nonformal education, one-on-one counseling, group facilitation, use of visual aids, and cross-cultural sensitivity. The health monitors were also trained in informal data collection techniques. Training was reinforced through periodic refresher training and through monthly supervision visits.

Monitoring

Several monitoring mechanisms were established. At the village level, the health monitors were responsible for maintaining a comprehensive monitoring system consisting of monthly documentation of the various village activities (EPI, ORS, education sessions) and household registers on births/deaths, growth monitoring, etc. Another type of ongoing data collection carried out by the health monitors was the "mini-survey." Every month, 10 women in one village were interviewed at random to elicit their attitudes and practices relative to the various MCH project interventions. The results of these interviews were discussed with the communities and with project staff at bimonthly staff meetings to assess project progress and to orient future educational activities.

The bimonthly meetings served as a monitoring mechanism in and of themselves. Staff from all three subprojects (health, agriculture, wells) met twice a month to review activities, discuss monitoring data collected at the village level, solve problems, and coordinate future activities.

Evaluation

The final evaluation of the MCHP was carried out in December 1989. A KAP survey was conducted with mothers to measure changes in knowledge related to the different child and maternal health practices. Given that a KAP survey is not sufficient for measuring changes in health/nutrition

practices, the evaluation suggested that additional data collection methods such as participant observation should have been conducted. For example, although improved dietary practices were reported, no hard data supported this claim.

Conclusions and Lessons Learned

- **Baseline Data Collection** Extensive baseline data were collected. The final evaluation stated that the data proved too vast to be used by the project.

- **Formative Research** The comprehensive formative research included a survey of the markets and in-depth qualitative interviews with men and women. The scope of the research was comprehensive and addressed not only cultural attitudes and beliefs but also the economic and social factors related to nutrition practices.

- **Target Groups** The project did not limit itself to mothers but included older women in the community as a target group. Inclusion of the older women was based on the observation, which appears to be true in most traditional societies, that such women are especially influential in matters of health/nutrition. Secondary target groups were the community leaders and fathers.

- **Integrated Strategy** Nutrition, including concerns for vitamin A deficiency, was integrated into the broader PHC program. The PHC program, in turn, was carried out in close collaboration with both the agricultural project, which addressed access to nutritious foods, and the wells project, which dealt with access to water. Integration was more than a theoretical concept. In fact, mechanisms for ensuring ongoing coordination between the subprojects took the form of bimonthly team problem-solving/planning meetings.

- **Community-Based Health Monitors** The "backbone" of the community-based project was the health monitors (trained nurses or midwives) who lived in the villages. They were trained extensively in interpersonal communications and informal education techniques and were supervised monthly. They worked with communities in a nondirective fashion, gained the respect of community members, and became influential communicators.

- **Training and Supervision** The health monitors underwent extensive training and regular supervision. The training focused on the process skills required to organize and communicate effectively with villagers. The final evaluation team commended the project for the excellent initial training provided to the monitors and suggested that similar training should be provided to the health center personnel in the project area.

- **Close Collaboration with Village Leaders** Throughout the project, time and effort were devoted to eliciting the inputs and support from village leaders for community-level activities. The final evaluation stated that the support of these leaders was critical for the success of the project activities.

- **Village-Level Monitoring** The project developed several practical systems for collecting information on a regular basis and for using it to modify/plan project activities. A village-based system of data collection on community and household activities was put in place. The collected information was fed back to the community and used for project planning. Other mechanisms for receiving feedback on the effectiveness of project activities were monthly informal minisurveys with women. The final

evaluation found the minisurveys to be particularly useful but suggested that they be conducted less frequently due to the amount of staff time needed to carry them out.

Project Title	Vitamin A/Child Survival Project	**Mauritania**
Implementing Agency	World Vision	
Funding Agencies	World Vision, USAID	
Dates	October 1987-September 1992	
Cost	$520,000 annually	

Project Goals/Objectives

(1) To decrease vitamin A-related mortality and morbidity
(2) To promote home gardening and consumption of ß-carotene-rich vegetables
(3) To distribute VAC to children (six months to nine years of age) and to women following delivery

Target Groups

Children under 10 years of age and women 15 to 45 years of age in Assaba Region

Formative Research

No qualitative formative data were collected.

Baseline Data Collection

A baseline survey of food consumption patterns was conducted in two departments. The survey methodology was not clearly specified, although a portion of it consisted of a survey of nutrition knowledge. A baseline survey of gardening practices was also conducted as was a survey of health and nutrition knowledge in December 1988. The mid-term evaluation's review of the different studies identified several weaknesses associated with sampling and survey design.

Communications Strategy

VAC distribution and nutrition education activities were integrated into a child survival program that included vaccinations, growth monitoring, promotion of a weaning food prepared with local foods, and health/nutrition education. The communications strategy to promote vitamin A included the use of mass media (slide shows), community media (songs developed by villagers and village theater), interpersonal communications (cooking demonstrations and village educational sessions), and promotional objects (t-shirts printed with GLVs). Manoff International assisted in developing the social marketing strategy.

Gardens

Pilot gardens were established in 21 villages. In each village, the community selected five garden committee members who were trained by a secondary agricultural extension agent. He provided technical assistance in gardening techniques, seeds, and tools. In the second year of the project, villages were expected to finance 60 percent of the garden costs to ensure community commitment and participation in the gardening. The gardens produced carrots, GLVs, tomatoes, and salad greens. It is not clear whether these were traditional or new vegetables in the area. Following the harvest, the project organized cooking demonstrations in the villages to educate villagers about use of the vegetables and trained community members in sun-drying techniques to preserve extra vegetables. The mid-term evaluation team observed obvious community enthusiasm and pride in the gardens.

Training

In the first two years, 66 Village Health Educators were trained and received supervision once every three months. They were expected to organize village health education sessions structured around the slide shows and, later, to conduct health education sessions on their own. No assessment was performed on the quality of the training provided.

Health Information System (HIS)

One of the important accomplishments of the project was the development of an HIS based on information needs identified by project staff. The HIS collected the required data and used the information to modify project implementation. The mid-term evaluation identified the HIS as a strong element in the project, particularly as the data were systematically used for monitoring purposes. Nonetheless, the evaluation noted some weak aspects of the HIS, including the family VAC enrollment system and the school VAC distribution recording.

Monitoring and Evaluation

The sample survey of mothers conducted at the outset of the project was repeated at the end of the second year of the project. It showed a considerable increase in mothers' nutrition knowledge. A comprehensive project evaluation was conducted in January 1989.

Conclusions and Lessons Learned

- **Two-Pronged and Integrated Strategy** A major strength of the project was its promotion of both short-term (VAC distribution) and long-term solutions (production of vitamin A rich vegetables). In addition, the vitamin A strategy was integrated into a comprehensive program of child survival activities. From both a cost effectiveness and community perspective, an integrated child health delivery system was definitely preferable to a series of isolated programs.

- **Preliminary Data Collection** Extensive initial quantitative survey data were collected and used to develop the different project activities. The mid-term evaluation, however, identified weaknesses in the survey design and the sampling procedures. Similarly, the evaluation stated that qualitative formative data should have been collected to provide more in-depth insights into existing nutrition practices as a basis for developing behavior change strategies.

- **Communications Strategy** The communications strategy included the use of mass media (slide shows), community media (songs and drama), interpersonal communications (village health/nutrition education sessions), and t-shirts (motivational items).

- **Community-Produced Media** The subproject used village-produced drama and song. Both a local *griot* (traditional village poet/singer) and the villagers themselves developed a number of songs about vitamin A. During a pretest of the songs, villagers understood and overwhelmingly preferred songs developed by their fellow villagers rather than those created by the *griot*. This experience suggested the advisability of using low-cost, community-produced media for communicating with villagers. The village-produced theater, according to project documents, was an effective way to introduce a message, to get people thinking, and to supply family entertainment in the evening. Village theater is an inexpensive educational activity, although it does require initial technical support and organization.

- **Child Survival Slide Shows** One of the main elements of the communications strategy was a series of slide shows on different child survival topics. A social marketing consultant to the project concluded that, because village people had free time primarily in the evening, slide shows would be attractive and effective. While such a medium seemed attractive, it is not clear that it was effective

in rural Mauritania. The mid-term evaluation identified several constraints that limited the usefulness of the slide sets and accompanying cassettes. A vehicle or other power source was not always available, and many slides were damaged in the harsh environment.

Four slide shows on different child survival topics were developed. The most important part of the educational sessions was the discussion following the slides. A set of questions intended to stimulate discussion after the viewing accompanied each slide show. Analysis revealed, however, that most of the questions were low-level, recall questions (Why should you eat green and yellow vegetables? Where did Yia get her vegetables?). Such questions require participants to recall what they have been taught but not to share their own beliefs and practices. Neither do they prompt participants to discuss proposed alternatives to their own experiences and resources. Adults learn more when they are required to apply new concepts to their own situations.

- **Health/Nutrition Educational Sessions** According to the project documents, 3,000 mothers had attended educational sessions in the villages in the project area by January 1989. Trained Village Health Educators facilitated these sessions by using the slide shows, songs, and village theater. While the number of sessions is known, information about the sessions provides no indices related to the quality of those sessions. Admittedly, it is difficult to evaluate the quality of educational sessions, but the effectiveness of such sessions depends on content and the pedagogical approach.

- **Gardening Activities** One of the project's strong points was the serious attention devoted to improving access to recommended vitamin A-rich foods as evidenced by the technical and material assistance provided for community gardening. Local gardening committees were trained, follow-up of the gardens provided, and demonstrations in vegetable preparation and drying carried out. Extraordinary effort was made to support the gardening activities despite numerous constraints, the most severe of which was lack of water.

- **Community Involvement** According to the mid-term evaluation, community participation--particularly through gardening--was an important element of the project strategies. For this component, World Vision (WV) support was purposely limited to encouraging community support. Villages were required to organize themselves for the gardening activities before project assistance was provided. The DIP envisioned the involvement of village leaders in the project to ensure infant vaccination and VAC distribution, but this component was weak. In the future, more effort should be devoted to involving local leaders in project implementation.

  The evaluation concluded that vitamin A deficiency was not a priority for Mauritanians, given more serious problems such as the lack of potable water. They stated that vitamin A intervention programs were generally more a response to donor agencies' priorities than to the felt needs of the community; as a result, community participation was difficult to achieve. In view of this constraint, WV staff made every effort to maximize the involvement of the community.

- **Monitoring and Evaluation** The survey of mothers' nutrition knowledge carried out after two years of project implementation showed a considerable increase in knowledge levels. However, changes in knowledge cannot be equated with changes in consumption patterns. Measuring changes in consumption patterns requires pre- and postproject information on dietary consumption.

- **Sustainability** Aspects of the project believed to contribute to sustainability were training activities conducted with health personnel, village health educators, and mothers; the cost recovery scheme for the gardening activity; and the practical HIS.

Project Title	Nepal Vitamin A Child Survival Project	**Nepal**
Implementing Agency	Nepal Netra Jyoti Sangh	
Funding Agency	JNSP/UNICEF, USAID/OIH and others	
Dates	August 1988-March 1992	
Cost	$1,200,000	

The information available on this project was incomplete.

Objective of Vitamin A Education Component	To provide mechanisms that enable program beneficiaries to increase their consumption of vitamin A-rich and other nutritious foods
Target Groups	Mothers and children under 10 years old
Formative Research	Assessment of cultivation and consumption patterns of vitamin A-rich foods in the community (no details on scope or methodology)
Baseline Research	A baseline KAP survey of mothers was carried out
Development of Educational Content	Formative data collection suggested the need to develop six key vitamin messages for mothers
Communications Channels and Activities	Agricultural extension agents and Community Health Volunteers encouraged production of vitamin A-rich foods through the establishment of kitchen, community, and school gardens. Nonformal education activities were designed to teach better management of diarrhea and other vitamin A-related diseases and to increase consumption of vitamin A-rich foods by using such teaching aids as a newsletter, flip charts, and other communications tools. Distribution of VAC, ORS demonstrations, immunizations, de-worming, and treatment of acute respiratory infection (ARI) were planned.
Monitoring of At-Risk Families	Community Health Volunteers (CHVs) maintained a register of at-risk families and treated children with vitamin A-related ocular signs.
Training	Ophthalmic assistants and CHVs were trained in educational and agricultural techniques. In turn, they trained the mothers in the villages.
Monitoring and Evaluation	Mothers' knowledge, attitudes, and practices (as revealed by the KAP survey) were monitored. Program impact was evaluated using Bitot's spot prevalence, anthropometric indices, and serum level of vitamin A. Interviews of CHVs on their training and activities were also performed.

Conclusions and Lessons Learned

The information available on the project was sketchy. Only a portion of the project document and part of the first project monitoring conducted in January 1990 were available. Given the limited documentation, it was

impossible to formulate any firm conclusions about project design or effectiveness. The following comments are tentative:

- **Data Collection** There was no mention of formative qualitative data collection on existing beliefs and practices related to child feeding and nutrition. KAP survey data were insufficient for developing nutrition education content. Similarly, follow-up KAP data collection was insufficient to measure the effectiveness of program activities. Reported dietary behavior was not equivalent to actual behavior. Baseline and follow-up data collection should include measures of dietary intake. The proposed system of data collection and computer analysis for monitoring activities appeared to be overly sophisticated for program managers' purposes. It was also incomplete in terms of program process indicators.

  Due to the limited information on the agricultural extension, school program, and nonformal education activities, it was impossible to assess the strengths and weaknesses of these program elements.

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Project Title	Vitamin A Mini-Project	**Niger**
Implementing Agency	HKI/AED	
Funding Agency	HKI, USAID	
Dates	Mid-1990	
Cost	Unknown	

The mini-project documents were not available for review.

Project Goal	To improve dietary practices, including vitamin A consumption, of pregnant and lactating women and young children
Formative Research	A rapid ethnographic assessment (community observation, focus groups, household consumption, market survey) was carried out
Target Groups	Younger men, older men, young women, and children
Communications Strategy	The strategy called for the use of village-level interpersonal communications, community media (masked dancers), and mass media (posters, slide shows). The project also planned to produce educational materials (flip charts or counseling cards, drama scripts, audio cassettes, and posters) for use by health workers. Radio producers would be trained.
Training	The training of village health monitors and local ministry health personnel would focus on the use of communications techniques and educational materials. Following training, the health personnel were expected to organize village education sessions.

Project Title	Nutri-Bus: Comprehensive Delivery of Health and Nutrition Services through Community Organization	**Philippines**
Implementing Agency	Nutrition Center of the Philippines	
Funding Agency	Various sources	
Dates	1979 to present	
Annual Costs	$1.34 per target group child in catchment areas, $1.88 per target group mother in catchment area	

Project Introduction

The Nutri-Bus project, in existence since 1979, aims to strengthen the delivery of integrated Maternal and Child Health (MCH) services at the community level. It incorporates both community development and institution-building to strengthen integrated MCH activities, including nutrition/vitamin A, at the community and health center levels. These strategies were chosen on the assumption that improvements in community nutrition status require changes in the quality of services provided by health workers, greater community access to certain basic resources, the support of community leaders for health/nutrition activities, and changes in mothers' behavior. (The "Nutri-Buses" are vehicles equipped with video projectors that are used by project personnel during group education sessions. The project has expanded or contracted the scope of its work in the provinces according to the level of funding currently available.)

Project Objective

To increase target group knowledge, attitudes, and practices on basic health and nutrition

Specific Objectives

(1) To improve target mothers' knowledge of basic health and nutrition
(2) To increase use of basic health/nutrition services (growth monitoring; EPI; food and nutrient supplementation, including VAC for children in risk categories and iron for pregnant women; ORS; deworming of preschoolers; and goiter identification and treatment)
(3) To increase household biointensive gardening
(4) To increase knowledge and improve attitudes of health workers on health and nutrition assessment and interventions

In keeping with the orientation of the project, the objectives encompass both individual and institution-level change.

Baseline Data Collection

An extensive survey of family health, nutrition, and socioeconomic status was carried out in each village where project activities were to be initiated. In addition, preschool children in the target communities were weighed to establish baseline weights.

Formative Research

It does not appear that any preliminary qualitative research was undertaken.

Community and Institutional Target Groups

The project activities were targeted to four audiences, from the household to the administrative service delivery level. At the community level, the

primary target groups were undernourished preschoolers, pregnant women, and lactating mothers. Secondary target groups at the community level were the Barangay Health Workers (BHWs). At the institutional level, target groups included health personnel, program planners and administrators, and service delivery personnel. The project director explained that the project's aim to strengthen health and nutrition communications includes communicating with the community as well as within the ministries and private organizations and encouraging communications between these institutions and the community.

Communications Strategy

The strategy consisted of a holistic approach to improving community health and nutrition, including consumption of vitamin A, through a series of interventions at both the community and institutional levels. At the community level, activities revolved around ongoing discussion with community leaders to elicit their support for the health/nutrition activities; training of female community group leaders; group education sessions, including the projection of video programs on health/nutrition followed by group discussions and the distribution of IEC materials; growth monitoring; distribution of food commodities, seeds, and seedlings for home gardening; distribution of deworming medications; follow-up of referrals to health services; and the training of community group leaders. At the institutional level, activities intended to reinforce the institutional response to community needs included advocacy with local government and private agencies to solicit technical and financial support for project activities ("Involvement Dialogue") and ongoing communications with local health units relative to the needs of specific communities. This is a strategy intended to stimulate intersectoral discussion of the health/nutrition needs of specific needy communities. The project attempts to serve as a catalyst by encouraging local agencies to collaborate and maintain this collaboration beyond the life of this project.

Integration of Vitamin A Component into Health/Nutrition Program

The educational content of the community activities was holistic and integrated the vitamin A component into the overall MCH program. Mercedes Solon explained that mothers were not only concerned about their children's eyes but also about their overall health. The program addressed those global concerns.

Community Involvement

The approach consisted of substantive community participation in all phases of the project to promote community ownership of the activities. Project personnel helped the community analyze its problems and organize itself to solve the identified problems. While the project objectives related specifically to health and nutrition, the community organizing component assisted communities in dealing with a broader range of problems by often helping community members gain access to other services. The community was involved in the initial community assessment, which included data collection and the discussion of problems and possible solutions. Community gatekeepers or leaders played an important role in the assessment.

Educational Materials

A wide variety of educational materials was carefully developed and pretested for use at both the community and institutional levels. On the community level, the materials included video modules on various health and nutrition topics and a health/nutrition handbook for the BHWs. On the institutional level, materials included teaching tapes for health personnel and nutrition fact sheets. For policy makers, the project published a periodic newsletter.

Training and Follow-Up

The project "communicators" (nurses by training) participated in a four-month training course (one month of formal sessions and three months of field training). Although the training content included technical aspects of MCH, the main portion of the training dealt with skills related to community organizing, counseling, supervision, and training. In addition to the initial training, the communicators received one day of refresher training each quarter. Weekly planning and problem-solving meetings for communicators working in the same area ensured follow-up of the training.

Monitoring

To monitor the effectiveness of the project activities at the community level, the communicators collected data from a sample of mothers in each village each month. The information, including anthropometric data, results of a knowledge test, and observations in the home and garden, was computer analyzed and fed back to the community within 15 days. The monitoring data were used at the weekly meetings to review and coordinate ongoing activities and to plan for the future.

Evaluation

Several evaluations of the Nutri-Bus activities were carried out. In 1981, a comprehensive evaluation showed improvements in mothers' health and nutrition knowledge and attitudes as well as improvements in their children's nutritional status as measured by weight for age.

Conclusions and Lessons Learned

- **Project Objectives** While the general project objective was particularly broad, the specific objectives covered all the basic MCH interventions as well as household food production. In addition, the last objective was directed at promoting change in health/nutrition personnel at both the village and service delivery levels. Given the project's efforts to promote change beyond the individual level, more specific objectives should have been formulated to focus on institutional collaboration and service delivery.

- **Formative Data Collection** The project has a comprehensive system for collecting quantitative baseline and monitoring data. However, qualitative information on community health/nutrition beliefs and practices is not collected. This type of information would have been useful in developing the educational content of communications materials.

- **Community and Institutional Target Groups** Based on the project objectives, target groups were not limited to mothers but included health personnel and institutions as well. The focus on interventions at both the community and institutional levels was an attempt to motivate local institutions and communities to take more responsibility for providing resources and services to needy communities.

- **Communications Strategy** The project was based on a broad concept of communications that includes communications not only with communities but also with institutions and between institutions and communities. The communications activities with communities combined the use of mass media and interpersonal communications. In one instance, groups of women viewed video programs and then participated in interactive counseling sessions. The size of the groups involved in these sessions, 50 to 100 mothers, however, apparently constrained the active participation of all women. The periodic working sessions, organized by the project and involving health and other public sector administrators, served as a catalyst to encourage the intersectoral discussion of health and nutrition problems and identification of locally feasible solutions.

- **Integrated Service Delivery** The Nutri-Bus project illustrates the use of single logistical and human resource base for the integrated delivery of a package of MCH services (family planning, parasite control, EPI, ORS, vitamin A, food supplementation, growth monitoring, goiter control, and gardening). The project director reported that the integrated approach considerably decreased the cost per beneficiary per intervention.

- **Training and Educational Materials** A team of instructional design, adult education, and media experts developed excellent training and educational materials. The project demonstrated an appreciation of the time, skills, and resources necessary to develop high-quality materials.

- **Training and Follow-Up** The project communicators, the key to the effectiveness of project implementation, received intensive training and regular supervision. The competency-based training used participatory teaching methodologies and focused more on strengthening the communicators' skills in interacting and communicating effectively with communities than on the purely technical aspects of MCH activities.

- **Evaluation** The available evaluation data suggested that the project has had a significant impact on the nutrition status of children (measured by weight-for-age) in the project areas as compared to the control areas. Specific data on the impact of the project at the institutional level were not found. Anecdotal information, however, suggested that the project improved staff attitudes and skills in communicating with communities and increased the institutional commitment of resources for dealing with health/nutrition problems. The project's institutional-level objectives required some innovative, qualitative data collection to evaluate *processes* related to these objectives.

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Project Title	Social Marketing of Vitamin A	**Philippines**
Implementing Agency	Nutrition Service, Department of Health	
Funding Agency	HKI	
Dates	March 1988-March 1990	
Cost	$158,700	

Project Introduction

This two-year project, carried out in two provinces in the Philippines, used a social marketing approach to promote individual-level knowledge and behavior change related to the consumption of vitamin A-rich foods. This approach was based on the assumption that changes in knowledge and attitudes regarding vitamin A will lead to changes in nutrition behavior. The project activities primarily focused on developing a variety of creative radio and print media messages intended to promote the desired changes in knowledge and, ultimately, in behavior. Other provincial and community-level activities were included in the project plan but received much less support.

Project Objectives

(1) To increase by 10 percent preschool children's consumption of vitamin A following exposure to motivational messages for one year
(2) To orient 50 percent of BHWs to the project
(3) To train 80 percent of Rural Health Midwives in the region to orient BHWs to vitamin A deficiency and prevention

The project set forth 12 additional objectives--all pertinent to the primary target audience--that proposed to measure exposure to vitamin A messages, knowledge of message content, and behavior change based on the messages received.

A few examples of these objectives follow:

(1) To reach 50 percent of the primary target audience through radio
(2) To reach 50 percent of the primary target audience through the BHWs
(3) To ensure that 75 percent of the primary target audience that heard the message knows that vitamin A prevents blindness
(4) To ensure that 50 percent of the primary target audience that heard the radio message serves at least one-half cup of GLVs daily
(5) To ensure that 50 percent of the primary target audience that heard the message from the BHW serves at least one-half cup of GLV's daily

Primary Target Audience

Mothers

Baseline Research

A local social science research institute carried out a quantitative pre- and postproject KAP survey of target mothers. A 24-hour dietary recall was also conducted.

Formative Data Collection

With initial assistance from Manoff International, the project team collected qualitative information from mothers, BHWs, TBAs, local leaders, and

traditional healers by using individual in-depth interviews and focus groups. The data collected from mothers focused on perceptions of health, nutrition knowledge and attitudes, sources of information or advice, and aspirations for their children. Information was collected from the BHWs and TBAs on their role in nutrition education, knowledge of eye health, and knowledge of nutrition (including vitamin A).

Use of Formative Data Collected

Before the development of the data collection methodology, program collaborators were asked to identify priority information needed for planning. Even though the exercise was useful, project collaborators noted that much of the collected information was already known and validated by existing research.

Communications Strategy Development with Advertising Agency Assistance

The communications strategy was developed in collaboration with a local advertising agency. The agency had extensive experience in message and media development for commercial products. It was reported, however, that the agency found it difficult to translate the formative data into a nutrition communications program. Socorro Ignacio of the Nutrition Service stated that advertising agencies were not used to promoting social products and that the local advertising agency that participated in the project understood neither the food and feeding situation in a poor family nor how to communicate with poor people. To deal with this constraint, the project team worked closely with the advertising agency and explained project needs.

Transfer of Social Marketing Methodology

Project collaborators reported that the social marketing methodology included the following steps: formative and baseline data collection; message development; development and pretesting of materials; and media campaign planning. Articulating these steps proved particularly useful to project collaborators later in the project.

Integration of Vitamin A Content into Other Department of Health Activities

A two-day module on vitamin A was prepared for health workers for integration into other training activities. Though well-advised, the integration of training activities met with many unavoidable delays in the Department of Health's training calendar. In some cases, the vitamin A training module was omitted from the training sessions or partially covered. Training documents suggested that the primary training methods were lectures and some role plays.

Community and Institutional Target Groups

At the community level, the primary target group, also referred to as the target market, included mothers with children from one to 7 years of age. The secondary target groups were mothers with children six to 12 months of age, nursing mothers, pregnant women, community health workers, TBAs, and formal and informal leaders. The secondary institutional target groups

were NGOs, health personnel, teachers and school administrators, and public officials.

Communications Channels and Activities

The project emphasized the use of mass communications (media and print), in particular, the formative research suggested that emphasis should be placed on the use of radio. A variety of creative print media was developed (posters, brochures, comic strips, stickers, and a primer for health workers on vitamin A). Twenty-two radio stations diffused a total of 18,000 radio spots, ran motivational quizzes, and promoted various types of contests. Health workers were to have supported the media campaign but were unable to do so because they were not trained as expected and most of the budget allocations went to developing media materials (radio and print). The project document stated that it would be useful for schools to integrate vitamin A into their curriculum. This activity, however, received little support and was not developed.

Provincial Task Force to Coordinate Social Mobilization Effort

In an explicit attempt to decentralize project planning and implementation, a provincial task force was to be responsible for all project activities at the provincial level. According to the HKI director, however, the expectations for decentralization were not totally realized. The task force was established but did not plan and implement activities or mobilize personnel to the extent expected.

Community Involvement

According to Mrs. Ignacio, the role of the community was to distribute handbills and to follow the health workers' instructions by implementing the recommended vitamin A-related behaviors.

Monitoring

Project monitoring consisted primarily of two carefully conducted quantitative studies that were contracted out to an experienced local social science research institute. The results of both monitoring exercises showed increases in the target group's knowledge, attitudes, and self-reported practices and suggested that radio was more effective in reaching the target audience. However, the BHWs were instrumental in improving practices among mothers through the use of interpersonal communications techniques.

Evaluation

The final evaluation of the project consisted of repeating the baseline KAP study and 24-hour dietary recall with target mothers from both the project and control regions. The same social science research institute that conducted the monitoring studies carried out the evaluation, which showed more exposure to radio messages, more visits from BHWs, and greater attendance at the nutrition classes in the project region compared to the control region. The evaluation also revealed that mothers in the project area evidenced greater change in their knowledge, attitudes, and beliefs about vitamin A than mothers in the control areas. However, significant changes were not found in dietary practices as measured by dietary recall.

Conclusions and Lessons Learned

- **Formative Data Collection** The project team carried out the initial qualitative data collection with outside technical assistance. A Manoff International consultant had major responsibility for designing the research methodology as well as for assisting the project team in some of the data collection and analysis. Nevertheless, the project team experienced considerable problems with the data analysis and was unable to locate experts who could assist in resolving matters. Similar experiences have been reported in other settings. Qualitative data analysis is markedly different from quantitative analysis and requires specialized skills.

- **Use of Formative Data Collected** The collected data did not correspond exactly to the program planners' needs. Mrs. Ignacio stated that, before formative data collection begins, it is important to review the available literature, identify the information needed to fill the gaps, and limit the data collected to any missing information. Initial discussions between program planners and collaborating social scientists are necessary to define the objectives of the study but are not always sufficient. One or more program staff members must be involved in the formative data collection and analysis to ensure that the program's information needs are addressed.

- **Scope of Formative Data Collection** One objective of the data collection was to study mothers' sources of information and the credibility of these sources. A review of the project's data collection methodology suggested that the examination of mothers' access to information emphasized the mass communications channels and the role of health workers but inadequately analyzed formal and informal indigenous communications channels at the community level, including social networks. The orientation of the initial data collection seemed to have contributed to the communications strategy's emphasis on the mass media.

- **Transfer of Social Marketing Methodology** The project was particularly successful in transferring to local project collaborators the systematic steps in the social marketing methodology for developing communications materials and media. Mrs. Ignacio stated that the steps were clear and benefitted the development of project activities.

- **Mass Media Communications Strategy** The project emphasis followed a social marketing methodology and relied on the use of mass media. A variety of creative radio and print materials was produced with the assistance of Manoff International and a local advertising firm. According to the project documents, "The intervention calls for a model of attitude and behavior change resulting from exposure to messages from a communications medium." The intervention assumed a relationship between an individual's exposure to a message and subsequent adoption of the behavior encouraged in the suggested message. The use of this model of the communications process as a basis for developing the strategy also explained the project's emphasis on mass media and its relative lack of support for institutional development and for strengthening interpersonal communications channels.

- **Coordination of Social Mobilization at the Provincial Level** A list of provincial-level groups that could be "mobilized" defined what each target group was to do in the campaign activities. The task force was to plan and coordinate the mobilization. Support for the task force and mobilization was limited, and, according to the HKI director, the provincial-level activities were weak relative to expectations. This is a common problem in mobilization schemes. The HKI director added that, in retrospect, someone should have been assigned to work full-time at the provincial level to provide ongoing support for these activities. Experience suggests that considerable and sustained resources must be devoted to such mobilization if such task forces are to assume substantive responsibility for program planning and implementation. The HKI budget allocated few resources for that purpose.

- **Community Involvement** According to the project document and discussions with project collaborators, expectations for community participation were limited. The project strategy's premise was that exposure to vitamin A messages would lead to appropriate behavior change. Yet, ongoing and substantive involvement of the community in planning and implementing community nutrition activities was identified as a factor that contributed to these activities' effectiveness and sustainability.

- **Project Monitoring** The monitoring system consisted of two formal monitoring studies carried out by a social science research group. The studies were well done but identified two constraints associated with formal monitoring. First, the participation of Department of Health personnel in planning and conducting the monitoring studies was limited, and the studies did not address some of the project team's priority issues. Second, contracting out the studies proved to be a problem. In that it did not allow department staff to strengthen their own monitoring skills. Both of these constraints could have been overcome if the studies had been carried out as a collaborative effort between the Department of Health and the research group.

- **Evaluation Findings** The final project evaluation suggested that the target group of mothers was exposed to messages from several sources and showed positive changes in their vitamin A-related knowledge, attitudes, and beliefs, but significant changes in behavior did not automatically follow. Explanations provided by the evaluators for these somewhat discouraging results included inadequate exposure to the messages; poor quality or inadequate quantity of messages; and insufficient project duration. However, the project may have depended too heavily on mass media for bringing about changes in dietary practices.

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Socorro Ignacio, Supervising Nutritionist-Dietitian, Nutrition Service, Department of Health, Manila. Interviewed

Adelisa Ramos, Director, Nutrition Service, Department of Health, Manila. Interviewed

Project Title	Teacher-Child-Parent Project	**Philippines**
Implementing Agency	Nutrition Center of the Philippines	
Funding Agency	Various sources	
Dates	Ongoing	
Cost	Unknown	

Project Introduction

This project aims to strengthen nutrition education activities in the primary schools and to foster communications on nutrition-related topics between the school and the community. The project has developed training materials for teachers and educational materials for students and has conducted training and follow-up of teachers in numerous schools in seven regions of the country.

Project Objective

To integrate nutrition into the school curriculum

Target Groups

Primary school children and their parents and teachers in rural and urban schools in seven regions

Formative and Baseline Data Collection

No information was available on any preliminary data collection.

Communications Strategy

The strategy involved school- and home-based activities. Workbooks developed for school children included practical, active learning exercises on nutrition and gardening. The books were used in the school and taken home where parents participated in other activities. In the schools, biointensive green leafy vegetable (GLV) gardens were planted and took advantage of organic fertilizers and pesticides. Cooking and tasting experiments with the home-grown GLVs were also conducted. The content of the program was integrated health and nutrition, including vitamin A.

Training and Follow-Up of Teachers

The project prepared extensive materials for teachers, not only on the technical aspects of gardening, but also on the planning and management of school programs. Monthly supervision is ensured to reinforce training content and to solve problems encountered during implementation.

Conclusions and Lessons Learned

- **School/Community Collaboration** The project illustrates an attempt to encourage parent involvement in school activities and to diffuse nutrition concepts from the school into the community. Project success appears to be closely related to the carefully structured instructional materials for use by the students in school and at home. The pedagogical expertise required to produce high-quality materials is often not sufficiently recognized.

- **Training and Supervision of Teachers** The effectiveness of the school-based gardening and nutrition education activities appears to be linked to the quality of the training provided to the teachers and to the regular supervision they receive. Many efforts to reinforce school programs have limited effectiveness because adequate training and follow-up are not provided. Further, when such training is provided, it

often addresses only the technical aspects of gardening. A critical component of the training for teachers participating in this project is the inclusion of information on planning and management of school gardens.

- **Monitoring and Evaluation** No information was available on project monitoring and evaluation.

Project Title	Iringa Nutrition Project (INP)	**Tanzania**
Implementing Agency	Government of Tanzania, UNICEF, WHO	
Funding Agency	Government of Italy	
Dates	1983-1988	
Cost	$3.48 million	

Project Objectives

(1) To reduce infant and young-child mortality and morbidity
(2) To improve child growth and development
(3) To improve maternal and child health
(4) To improve the capabilities at all levels of society to assess and to analyze nutrition problems and to design appropriate actions

Target Groups

The project documents did not explicitly list program target groups. While the health/nutrition impact of the program was felt at the individual/family level, program activities were oriented to people at various levels: village (mothers, children, VHWs, village health committees, village council, TBAs, and traditional healers); ward (ward secretary and Ward Implementation Committee); division level (Division Secretary); district level (District Council and District Implementation Committee); and regional level (Regional Development Director and Regional Implementation Committee).

Formative Research

The various studies conducted to develop program activities included operations research studies on different aspects of existing MCH program activities. The details on these studies were not available.

Baseline Data Collection

Extensive baseline data were collected on infant/child nutritional status (weight-for-age), mortality, and mothers' knowledge of child nutrition, malnutrition, ORS, and growth monitoring.

MultiLevel Problem Analysis and Action

Two program development tools--the "conceptual framework" of factors relating to child malnutrition and death and the "Assessment-Analysis-Action" cycle--were used in support of program objectives to improve capabilities at all levels of society, to analyze nutrition problems, and to design appropriate action. Both tools were used to develop the capacity of program collaborators (from the family to policy levels) to analyze child health and nutrition problems and to search for possible solutions. For each level of society, the program structured the assessment and analysis of problems that could be addressed at that level with the available resources.

Program Components

There were six program components:

- Systems development and support (policy and program communications, monitoring and evaluation, infrastructure support, and training)
- Maternal and child health (growth monitoring, ORS, vitamin A, ARI, malaria, EPI)
- Water and environmental sanitation (latrines)

- Household food security (home and school gardens, drought-resistant crops, village-level seed multiplication, food preservation, small animal raising, and locally based weaning food)
- Child care and development (village daycare centers)
- Income-generating actions (credit to women's groups), research, and management.

Communications Strategy

Communications assumed a multifaceted and critical role in the program. The concept of communications used in Iringa differed considerably from that in most other community nutrition programs. Throughout the INP, the emphasis was not on communicating specific messages related to child health/nutrition but rather on strengthening communications mechanisms and processes at and between all levels of society, from the village to the regional level. For example, at the village level, the project encouraged communications on nutrition problems and solutions among households, village leaders, and resource persons; among Village Council members; and at successively higher levels.

Integrated Strategy

The nutrition program was based on a holistic analysis of nutrition problems. Neither the problem analysis nor the proposed programmatic interventions artificially isolated one or several aspects of nutrition. Hence, the INP strategy addressed various elements directly or indirectly related to nutrition. Similarly, relative to vitamin A deficiency, no attempt was made to isolate vitamin A concerns; rather, they were part of a comprehensive strategy for improving access to and consumption of nutritious foods. In operational terms, all of the INP activities were incorporated into the existing PHC programs and structures.

Social Mobilization

In the INP, the UNICEF concept of social mobilization was operationalized as a tool for increasing support at all levels of society for dealing with nutrition problems. It consisted of advocacy--making people aware of nutrition problems--and education--providing those same people with the skills to identify possible solutions and to make appropriate decisions regarding the allocation of available resources for solving problems at all levels of society. Social mobilization was not merely a concept but a strategy with well-defined mechanisms for carrying out the advocacy and educational activities.

Community Involvement

The project developed mechanisms for promoting sustained community involvement. Community-level structures were strengthened or put in place (Village Councils, VHWS, TBAs, child care attendants). Monthly "Village Health Days" in each village were another mechanism for eliciting community participation and awareness of nutrition problems and actions. The health days were both social and educational events attended by community leaders and all mothers and children. Activities included baby weighing, health/nutrition education talks, and demonstrations. After the weighings, the VHW and a Village Council member made household visits to children who exhibited problems. The VHW and Village Council member developed an action plan in consultation with the mother who was expected to carry out the plan alone or with the help of the Village Council.

Training and Sensitization

Training was critical to the implementation of the INP and was considered to be an intervention itself--perhaps the most important one. The objective of training, which included sensitization and education, was to train each level of society how to analyze the causes of PEM at its respective level (from household to regional) and how to search for solutions within the resources available at each level. All levels were trained in the use of the Assessment-Analysis-Action problem-solving methodology. In contrast to most health training schemes that emphasize technical content, the INP stressed the problem-solving process.

Training was carried out at the village level with CHWs (for three months with occasional refresher seminars); with TBAs, traditional leaders, and daycare attendants (one to three months); and with the *kader* at the ward, district, and regional levels (occasional one to five-day seminars).

Community-Based Monitoring

Monitoring was defined as the collection and use of information for planning purposes. The basis for the monitoring system was the monthly collection of growth monitoring and mortality data at the village level. Once collected, the results were used to provoke discussion within the Village Council about village-level action to be taken to improve nutritional status. Monitoring results and planned actions were communicated quarterly to the ward level. The ward followed the nutritional evolution of each village and helped deal with problems that could not be solved exclusively at the community level. The monitoring system also contributed to strengthening the linkages between the community and higher levels. In a discussion of the uses of information in the INP, Pelletier pointed out that there "is a fundamental difference between using information to motivate or catalyze action versus using information for 'technocratic' impact evaluation" (Pelletier, 1989, p. 44).

Final Program Evaluation

According to the project documents, the end-of-project evaluation revealed two main findings. First, the program area exhibited significant decreases in both malnutrition in infants and young children and child deaths as compared to the control areas. Second, there was increased awareness of nutrition problems from the family to the decision-maker level as well as increased commitment on the part of decision makers to solving such problems.

Conclusions and Lessons Learned

- **Conceptual Framework for Problem Analysis** The framework was a tool for motivating all levels of society to analyze holistically the underlying causes of malnutrition. The three underlying causes addressed by the project included insufficient household food security, inadequate child care, and insufficient basic health services. The analysis of these factors led to the development of program interventions for each cause. In contrast to the problem analyses carried out in most projects, the analysis of nutrition problems guided by the conceptual framework did not focus exclusively on the individual; rather, it took into account the multifaceted social environment that, to a great extent, dictates individual options and behaviors.

- **Program Objectives** In contrast to most community nutrition programs, the objectives of the INP did not focus exclusively on knowledge and behavior change in mothers. Rather, the overall objective was to bring about changes in individuals' and institutions' ability to analyze and use available resources to solve nutrition problems.

- **Target Groups** In keeping with the program objective of promoting fundamental change in the social processes that contribute to poor nutritional status, target groups extended from the household level to regional policy levels. Hence, the INP promoted changes in social norms and institutional priorities instead of encouraging individual mothers to change their behavior.

- **Process Orientation of the Communications Strategy** In the INP, communications was defined in broad terms to include the exchange of information, problem solving, monitoring, and reformulation of strategies in an iterative fashion. Strengthening communications mechanisms at and between all levels of society was one of the key elements in the INP. The focus of the strategy was not on communicating specific messages but rather on the process itself. One of the end-of-project documents concludes, "The key (to INP's success) appears to lie in the emphasis on developing a process whereby problems are identified and solutions are found" (Pelletier, 1989, p. 42). The same document stated that, even though the program promoted the adoption of certain nutrition interventions such as growth monitoring, it placed great emphasis on enhancing communications, problem solving, and the resulting actions relative to identified nutrition problems. It was suggested that the program put in motion a communications process that would continue beyond the life of the externally funded program.

- **Focus on Severe Malnutrition** In focusing on reducing severe malnutrition, the program realized its most dramatic impact. The final evaluation suggested that in the future the program should broaden its focus to deal more with moderate malnutrition.

- **Community-Based Monitoring** A simple system of village-level growth monitoring was the basis for following program activities at the community level but, more importantly, was a tool for stimulating communications and action on nutrition problems and needs.

- **Social Mobilization** The term social mobilization is frequently used, particularly in UNICEF program documents, but is rarely applied to implementation strategies. The final evaluation identified the major INP effort to mobilize all levels of society to address nutrition needs as one of the most important aspects of the project in terms of its short-term as well as potentially long-term impact on the region. The final evaluation contrasted the "process" orientation of the INP social mobilization approach (problem solving, self-organization, and knowledge sharing) with the "product" orientation in a social marketing approach (promoting a product/idea defined by experts).

- **Community Involvement** The INP was built on the Tanzanian ideology of people-centered development that promotes self-reliance. The active village-level involvement of households, local leaders, and various project collaborators (CHWs, TBAs, traditional healers, daycare attendants) promoted the highest level of participation, "empowerment," or the "initiation of action" to solve problems identified by the program actors themselves.

- **Training and Sensitization** Training, one of the main components of the INP, was the principal vehicle for strengthening the knowledge and skills at all levels of society to analyze and solve nutrition problems. Training was conceived not as a one-way transfer of technical information but rather as an educational process of exchanging information, analyzing problems, and planning and evaluating different interventions.

- **Evaluation** The final evaluation attributed the program's success in improving infant/child nutritional status and reducing infant deaths to three critical factors: the use of the holistic conceptual framework for the analysis of nutrition problems at all levels of society; the use of the Assessment-Analysis-Action cycle; and social mobilization. All three are related to the program's emphasis, from beginning to end, on the "process" of analyzing and solving nutrition problems rather than on any particular technical interventions.

- **Sustainability** The final evaluation concluded that the emphasis placed on strengthening the processes used at all levels of society to address nutrition problems (by relying on the holistic conceptual framework, Assessment-Analysis-Action cycle, and social mobilization) contributed to increased self-reliance at the community and institutional levels and will have a sustained impact on development in the region. Two striking examples demonstrate the increased commitment to and self-reliance in dealing with nutrition problems. At the conclusion of the program, an average 20 percent of village budgets had been allocated to child health/nutrition activities, which 92 percent of the VHWs were receiving a monthly remuneration from the village government.

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Project title	Prevention and Control of Xerophthalmia and Vitamin A Deficiency in Tanzania	**Tanzania**
Implementing Agency	Tanzania Food and Nutrition Centre	
Funding Agencies	Wageningen University, ICEPO, UNICEF, WHO, FAO	
Dates	Ongoing	
Cost	Unknown	

Project Goal	To reduce the prevalence and severity of vitamin A deficiency, xerophthalmia, and nutritional blindness
Objective	To make vitamin A capsules available in all health facilities in Tanzania for children at risk of xerophthalmia
Formative research	None
Target Groups	High-risk children six months to six years of age
Strategies	Planned activities included adding VAC to essential drug kits, nutrition education through radio and press releases, and health education through existing MCH programs.
Communications Channels and Activities	In addition to the use of radio and press, posters were to be developed by the MOH/Health Education Unit.
Training	Assistant Ophthalmological Medical Officers received technical training on eye diseases related to vitamin A deficiency. Chemists and biochemists were trained to conduct retinol and carotene analyses of foods and clinical nutrition tests of body fluids.
Monitoring and Evaluation	According to the project document, an evaluation of each project component was to be carried out; however, no further information was available.

Conclusions and Lessons Learned

- **Formative Research** Apparently no formative data collection was undertaken. Because no monitoring or evaluation data on the project were available, it was difficult to assess the effectiveness of project strategies.

- **Materials Development** While the educational component of the project was considered important, it did not appear that the educational materials were prepared systematically. The preparation of effective educational materials requires preliminary qualitative data collection, careful development of concepts and images, and pretesting with the target population. There was no indication that these steps were followed.

- **Communications Strategy** Project documents stated that modern communications techniques (radio and press releases) were used to communicate with target group mothers. It is not clear that these

modern/formal communications methods were the most appropriate. There is no mention of the use of informal/indigenous communications channels.

Sources of Information

Temalilwa, C.R. Memorandum to L. Lindsay regarding IVACG Communication/Education Task Force Survey, November 16, 1987.

Project Title	"Mother Loves Her Child" Social Marketing of Vitamin A-Rich Foods	**Thailand**
Implementing Agency	Institute of Nutrition, Mahidol University	
Funding Agency	USAID	
Dates	October 1988-September 1991	
Cost	$300,000	

Project Introduction

This three-year project employed an integrated strategy to promote improved health and nutritional status, including the increased consumption of vitamin A-rich foods. The strategy of this multifaceted communications intervention involved both institutional and community development. The choice of this strategy reflected the project's philosophy of serving as a catalyst to encourage community and institutional collaborators in different sectors to undertake activities that would facilitate access to GLVs and information on their importance in the diet. To ensure effectiveness, these activities were believed to be sustainable beyond the term of the project. Project activities were varied and included training, supervision, materials and media development, gardening, and intersectoral liaising.

Project Objectives

(1) To increase KAP on vitamin A-rich foods
(2) To increase dietary intake of vitamin A-rich foods
(3) To improve vitamin A status of children and lactating and pregnant women
(4) To develop a model for improving vitamin A status through nutrition education

Baseline Data Collection

Extensive baseline data were collected (24-hour dietary recall, anthropometric, clinical, skin fold, serum retinol, and a KAP survey).

Formative Research

The formative research for the development of the communications program included a survey of markets to determine availability of vitamin A-rich foods, a survey of school vegetable gardens, and in-depth individual and group interviews.

Community and Institutional Target Groups

Project activities were aimed at both the community and institutional levels. At the community level, the primary target groups were preschool and school-aged children and pregnant and lactating women. Other community target groups included Buddhist monks, community leaders, grandmothers, and other significant persons. At the institutional level, target groups included government representatives of the mass media and government officers in agriculture, education, health, and the Ministry of the Interior.

Development of Vitamin A Strategy

A systematic and thorough process was used to select the GLV to be targeted by the educational activities. The process involved the identification of available sources of vitamin A and the evaluation of these alternatives in terms of nutritional value, availability to villagers, and community attitudes.

Once the ivy gourd leaf was selected, alternative recipes were tested with mothers to identify the most acceptable preparations.

Program Planning Process

The program was not developed in detail before it was initiated. Rather, the project adopted a participative, learning process approach to program planning and implementation. A series of planning meetings was held during the term of the project from the regional to the subdistrict level to involve the collaborators from the different sectors (health, agriculture, education, rural development) in defining program strategies. This flexible approach to planning was in keeping with the project's aim of acting as a catalyst to encourage intersectoral and multilevel collaborators to undertake activities related to the project's overall goal of improving health and nutritional status.

Decentralized Approach

The project was carried out in two districts in the northeast region of the country. An explicit and consistent effort was made to decentralize project planning, implementation, and monitoring to promote local initiative and responsibility and to ensure ownership of the project at the district level. The project team's approach was to provide general guidelines for the project but to elicit from collaborators specific suggestions for project activities and implementation strategies. Many of the project activities were suggested at the district level; the project team assisted in organization and implementation.

Communications Strategy

The project included activities at both the community and institutional levels and focused on the use of interpersonal communications channels supported by mass media, print, and promotional materials. The project carefully defined the content of the nutrition messages it promoted. However, the project's notion of communications included not only the communication of messages to the community but communications between development sectors and between development workers and communities.

Institutional-Level Communications Activities

At the institutional level, periodic workshops were carried out with each of the target groups. Workshops were designed to communicate project information and, more importantly, to involve the participants in a genuine dialogue about alternative project activities, assessment of activities carried out, and coordination among the different levels and sectors. Meetings were held with radio broadcasters who received prerecorded radio spots and monthly information sheets on key maternal and child health themes. The radio broadcasters association organized "Meet the People" visits to the villages to promote the project and to listen to constituents. Health workers and TBAs were trained and received support materials (MCH manual).

Community-Level Communications Activities

Several different of activities were conducted specifically with mothers and school children. Mothers participated in health/nutrition counseling sessions, including cooking demonstrations, at the health centers. Pregnant mothers received a booklet on caring for newborns and newlyweds received a booklet on parenting skills. Newborns received bibs with the project logo. School children were involved in growing ivy gourds in school plots and in raising

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animals. Backpacks with the project logo were awarded to student teams in growing competitions. Ivy gourds and animals provided additional food to improve school lunch programs. Teachers received technical training in agriculture and animal husbandry, and the project helped support a teacher-produced newsletter on school project-related activities for students and their parents.

Buddhist monks supported the project by participating in meetings and expressing ideas for project activities. They received a tape recording of a prominent monk encouraging them to support community development projects as well as information sheets containing MCH information and poetry for use in preparing sermons. Entertaining health/nutrition activities were organized in conjunction with national and religious festivities or holidays.

Integrated Approach

The project integrated the substantive involvement of officers from four government sectors: education, agriculture, health, and the interior. In addition, while the educational material emphasized vitamin A messages, systematic incorporation of these messages into other MCH nutrition and health messages also occurred.

Media/Materials Development

The social marketing approach used in the development of all media and print materials included initial formative research, message development, and pretesting. Innovative low-cost and participatory approaches to media and materials development were used. For example, the project developed a prototype for a billboard and involved communities in its construction and painting. It also developed information sheets for broadcasters to use as a basis for creating their own programs. Another important aspect was the involvement of the institutions in preparing the materials they would use.

Training

Training sessions were conducted with project collaborators at the institutional and community levels: health workers and TBAs were trained in child health/nutrition; agricultural workers in ivy gourd production; and school teachers in the organization of school gardens and small animal husbandry projects. The training included not only technical information but skills related to working with the community such as community assessment, community organizing, nondirective facilitation, and information on sociocultural factors related to development.

Evaluation

The project evaluation used a four-fold strategy to assess the project in general and to identify enabling and constraining factors that influenced the project and its potential sustainability. The evaluation included an assessment of vitamin A status and dietary intake as well as a study of knowledge, attitude, and practice changes; a qualitative study at the community, district, and provincial levels; a professional social marketing evaluation; and a participatory community-based assessment.

Conclusions and Lessons Learned

- **Baseline Research** Extensive baseline data were collected. Most projects would probably not have the resources for such extensive data collection; dietary intake data were probably most important for evaluation purposes.

- **Formative Data Collection** Comprehensive formative research was conducted on the availability of vitamin A-rich foods in the markets, school gardening practices, and the community's nutrition-related knowledge and practices. Each of these categories of data would be desirable for similar projects in the future.

- **Program Strategy** The project's strategy drew on both social marketing and interpersonal communications concepts and focused on institutional and community development. The social marketing methodology guided the development of communications materials. Organizational development principles guided the collaborative, nondirective work with institutions. In addition, community development concepts provided the basis for efforts to increase community institutions and groups' awareness of nutrition problems and to enhance institutional/organizational capacity to deal with such problems. All aspects of the project evidenced conscious efforts to identify sustainable activities based on existing human and other resources.

- **Increasing Access to GLVs** The project's strategy included both nutrition education and practical technical agricultural support to improve access to the foods promoted by the program. Ivy gourd growing was promoted in the schools and the community. Seedlings were distributed in the community, and school children helped families construct simple trellises for the gourds. From discussions with villagers in the project area, it appeared that improving access to GLVs greatly contributed to increased consumption.

- **School Gardening** The school gardening program, unlike many such programs in the past, appeared to have some elements of success in providing valuable lessons for program planners. Headmasters and teachers received training on the technical aspects of gardening as well as on the planning and management of student gardens. Regular supervision of the teachers was ensured to provide encouragement, help solve technical problems, and support efforts to develop other nutrition-related projects--something that many teachers did. The teachers produced a newsletter that reported on school nutrition activities and participated in workshops in which they learned how to develop their own visual nutrition education materials. All of these elements suggested that the methodical development and implementation of school-based activities contributed significantly to the teachers' assumption of responsibility for such activities and to the effectiveness of the activities in general.

- **Communications Strategy** Throughout its duration, the project operationalized a broad and two-way concept of communications and problem solving by establishing mechanisms for working with both institutions and community groups. The strategy not only attempted to communicate nutrition "messages" to program collaborators but sought to involve collaborators in substantive discussions of how to orient and implement program activities. From this perspective, the communications activities were mainly interpersonal and were reinforced by the use of mass media. The project illustrated how mass media and print materials can be effectively used to support broad institutional and community development processes.

  The interpersonal communications component at the community level developed activities targeted to several different groups. In an attempt to change the behavior of individual mothers and influence collectively held norms, the project could have devoted additional attention to working with the social networks of which mothers and grandmothers were a part.

- **Institutional Support** Considerable time and effort were devoted to developing institutional support and ultimately "ownership" of the project activities. The project staff stated that sustained community-level projects were possible only where institutional support was ensured.

- **Decentralized Approach** A factor that significantly contributed to the success of the community-level activities was the institutional and community-level collaborators' assumption of project ownership. This can be attributed to the decentralized, nondirective fashion in which the project was developed and implemented and to the continuous contact and feedback provided to the various collaborators.

- **Supervision/Follow-Up** The project strongly emphasized the ongoing supervision and follow-up of project activities at the institutional and community level. Several months after the project began, a decision was made to recruit a specialist skilled in nondirective community development to ensure follow-up of the institutional and community-level collaborators on a full-time basis. That individual's continuous and nondirective supervisory style contributed significantly to effective implementation of ongoing project activities.

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Valyasevi, Dr. Aree, Mahidol University, Bangkok, Thailand. Interviewed.

Project Title	Africa Vitamin A Gardening Project of the Asian Vegetable Research and Development Center (AVRDC)	**Multiple**
Countries	Benin, Burkina Faso, Ethiopia, Kenya, Malawi, Mali, Mauritania, Niger, Sudan, and Zambia	
Implementing Agency	AVRDC in collaboration with national government institutions	
Funding Agency	USAID	
Dates	October 1986-September 1989	
Cost	Unknown	

Project Objective To promote the production and consumption of locally available and culturally acceptable garden crops rich in vitamin A

Target Group Rural farm families

Baseline Data Collection A preliminary gardening needs assessment was conducted to identify culturally acceptable vitamin A garden crops for possible cultivation in the given region and for which necessary planting material was available. Before-and-after serum retinol levels were to be measured. No baseline dietary intake data were collected.

Project Strategy The strategy was to encourage both the growing of vitamin A-rich crops in family gardens through technical agricultural assistance and the consumption of those crops through nutrition education. The generic steps in the strategy used in each country were garden research and village testing; development of a training curriculum based on village tests; training of African development specialists (regional training); backstopping trainees when they returned to their countries to train farmers; and project monitoring and evaluation.

Training The project planned was to provide extensive training to 40 to 60 African development specialists from four to six countries, who, upon return to their respective countries, were to train farming families.

Monitoring and Evaluation Midpoint and final evaluations were to be conducted by USAID No evaluation material was available.

Conclusions and Lessons Learned

- **Gardening Needs Assessment** The first step in the program methodology was to carry out a gardening needs assessment in each country. Too often, Vitamin A projects that promote gardening do not have ready access to agricultural expertise and therefore fail to undertake a much-needed and systematic initial assessment.

- **Training** The proposed training scheme involved 100 days of training for a group of African development specialists. The curriculum appeared particularly strong in terms of its technical agricultural content but weak in the areas of adult education and community development approaches that were necessary to train specialists to work effectively with farmers. Training 40 to 60 specialists for 100 days and expecting them, in turn, to train farmers does not appear to be the most appropriate training strategy.

An intermediate level of training of shorter duration should have been targeted to a larger number of extension agents who could subsequently work with a larger number of farmers. In this case, the training of the specialists should have included at least two weeks of training the trainers.

- **Nutrition Education** No details were provided on the approach to nutrition education/communications. The topic did not appear in the proposed curriculum but perhaps was included at a later date. The education component is especially important; in fact, it has been shown that, where the education component is absent or weak, increased production does not necessarily lead to increased consumption.

- **Monitoring and Evaluation** Information on the project evaluations was not available. Given the project objective, the absence of a pre- and postdietary assessment to measure changes in vitamin A-rich food consumption was a weakness in project design. The project planned to collect before-and-after serum retinol level values. The 24-hour dietary recall method would have been more appropriate.

Project Title	The Vitamin A Programme	**14 High-Risk Countries**
Implementing Agency	National governments with assistance from FAO	
Funding Agency	FAO and other donors	
Dates	January 1986-January 1996	
Cost	FAO contribution: $7.5 million for first five years	

Project Objective

To increase the production and consumption of vitamin A- and ß-carotene-rich foods

Program Strategy

The program provides support to a variety of agricultural-based projects developed by individual countries. The scope of program activities to be supported by the FAO program include identification of carotene content in local foods and dishes; production, storage, preservation, and processing of vitamin A- and ß-carotene-rich foods; assessment of the impact of different communications methods that promote increased dietary consumption of vitamin A-rich foods; development of monitoring and evaluation methods for agricultural-based vitamin A deficiency project activities; and identification of ß-carotene content in local foods and dishes.

Examples of Funded Projects and their Objectives

Nepal	Three-year project to use revised and strengthened vitamin A curricula to train trainers and community members (school children and adults) in formal and nonformal sectors of agriculture, health, education, and panchayat and to provide local training to local government representatives
Burkina Faso	Two-year project to increase production and consumption of carotene-rich foods in one province
Malawi	Three-year project in the Lower Shire Valley for nutrition education and production of carotene-rich vegetables and fruits
India	Study in conjunction with All India Institute of Hygiene and Public Health to evaluate the effectiveness of home gardens and nutrition education efforts
Sahel Countries	Two-year regional project to provide communications support to national vitamin A projects that emphasize use of mass media (rural radio, video, etc.)

Monitoring and Evaluation

Biennial progress reports were produced on the program's activities throughout the world. As of the last available progress report (January 1991), some projects had been developed and funded--but more are in the process of either being developed or require funds for implementation.

Conclusions and Lessons Learned

- **Program Constraints** A major constraint in adequately addressing vitamin A deficiency is the low priority that government health and nutrition interests assign to agricultural-based, long-term solutions for vitamin A problems. The reality of a resource-scarce environment would seem to support the need for the development of vitamin A programs as horizontally rather than vertically integrated components of nutrition programs and agricultural and rural development programs. A related constraint is the lack of financial resources and lack of coordination among governments and agencies. A second constraint identified by the program is that government health sectors are typically more attuned to the vitamin A deficiency problem than are the agricultural sectors. This observation confirms the need for ongoing efforts to promote collaborative health-agricultural strategies.

- **Agricultural Emphasis** As stated by the project documents, because most countries view the vitamin A deficiency problem only as a health problem, the health sector must often act alone in addressing vitamin A issues. The project's important contribution is its emphasis on the production aspect of vitamin A-rich foods to improve access to the foods promoted by the educational efforts.