

Designing a Community-Based Nutrition Program
Using the Hearth Model and the
Positive Deviance Approach - A Field Guide

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PREFACE

It is hard to describe the sense of relief and completion I have with the publication of this manual. From 1987-92 I headed a five country study of Positive Deviance in Nutrition. It was the most expensive piece of nutrition research that UNICEF ever centrally funded. We turned out four books, a couple dozen journal articles and book chapters, six Ph.Ds. and countless reports.

But we never produced the practical field guide which was a major goal of the research. This preface explains why by answering obvious questions.

What is positive deviance?

Positive deviance in nutrition describes young children who grow and develop adequately in poor families and communities, where a high number children are malnourished and frequently ill. They are **positive deviant children**, and they live in **positive deviant families**. These families have developed culturally appropriate **positive deviant practices** that enable them to succeed in nourishing and caring for their children in spite of poverty and an often high risk environment. These families are uniquely able to provide solutions to malnutrition to other poor families in their communities.

The concept of learning from positive deviant families crept into the literature early in the international nutrition movement, in the mid-1960s, with calls to pay a great deal more attention to those individuals who are apparently healthy while consuming diets which seem to us to be restricted (Mark Hegsted, 1967), "to study successful mothers" (Joe Wray, 1972), and to identify village women who can cope and manage to rear healthy and active children (Peter Greaves, 1979) applying "maternal technology" (Leonardo Mata, 1980). By 1982, Maria Alvarez had published a half dozen studies from poor neighborhoods in Chile on mother-child interactions and home environments related to good nutrition of infants. I believe Gretchen Berggren first came up with the term "Positive Deviance" in the mid-1980's.

Our first book, **Positive Deviance in Child Nutrition** (Zeitlin, Mansour and Ghassemi, 1990), reviewed more than 180 studies of caring behaviors and social and cultural networks that protect the nutritional status of poor children and mothers. In the following years the various teams on the project (Aina, Agiobu-Kemmer, Ahmed, Annunziata, Armstrong, Babatunde, Beiser, Bonilla, Brown, Chomitz, Colletta, Ebam, Engle, Garman, Gershoff, Ghassemi, Guldan, Klein, Kramer, Lamontagne, Mansour, Megawangi, Morales, Peterson, Rogers, Satoto, Seireg, Setiloane, Sockalingam, Weld) published more of the same, showing that women's education, a happy mood, and most measures of loving, attentive and patient parenting are linked to good nutrition. Positive deviant children tended to live in cohesive, supportive and well-spaced families. These families tended to live in supportive communities with good social services.

Positive deviant infants are breast fed. The diets of older positive deviants are richer in animal foods, such as milk, fish or meat, in fruit and vegetables, and in day-to-day variety than the diets of malnourished children. Their food, water, and play environments are cleaner and safer. Their health care is better.

With such numbingly obvious findings, why did you fail to produce a simple manual?

In technical terms, the findings were significant, but the effect sizes were small. Academic

colleagues were suspicious of "soft" measures of attitudes and behavior. The ways in which different cultures express attentiveness, cohesiveness, good diets, and so on are different. In the quest for scientific respectability, we relied on sample sizes and analysis methods that were too big and complicated to package in a field manual.

It wasn't always obvious. Positive deviance is one positive layer in a stack of negative adaptations to poverty and food insecurity. Other adaptations include high death and malnutrition rates. Population "fatigue" diminishes survival to the number of people the food supply can support. Malnutrition "adapts" children into small adults who survive on less food. Negative care allows unaffordable children to die without blaming their parents. Subsistence agriculture depends on child labor. Negative feeding and care practices entwined with adaptations of this nature are the primary targets of nutrition education and growth-monitoring in developing countries.

Positive deviance is the evolutionary vitality at the top of the stack - the spark of flame that flickers into good growth and health, on top of the cinders, a backdrop of practices that damper the fire so it doesn't go out. This complicated overlay does reduce statistical effect size. It does mean that researchers don't always find good practices that can simply be taught to the whole community.

If a behavior is adaptive because it helps children to survive in spite of conditions that increase mortality, the first need may be to change those conditions. After the change, behaviors that protected children may hold them back. For example, constant carrying on the mother's back protects undernourished children in unsanitary, unsafe environments. But it slows the development of well nourished children in safe clean environments.

Then, if it's hard to find positive deviance, how does this simple Manual come up with the answers? And, is it true that the Positive Deviance Investigation in the Manual visits a total sample size of only six families?

Yes, it's true and cleverly done.

First, six is about as many households as a village team can analyze comfortably and discuss meaningfully.

Second, the manual uses a positive deviance approach to design a community-based "Hearth" model. But this doesn't depend on positive deviance practices alone. It is based on decades of experience in rehabilitating children and educating their mothers using scientifically valid, field tested methods.

Third, the guide validates the six family investigation with a qualitative assessment of positive and negative deviance factors conducted by a panel of local experts. This assessment is based on the results of a literature review, a situation analysis, a nutrition survey, a series of focus groups, and a community analysis of the causes of malnutrition. Where results from the six families differ from the expert assessment, the team finds out why and modifies the results accordingly.

Fourth, the positive deviance approach mobilizes the community. The search for and discovery of positive deviance is a dramatic device that leads the community back to the source of its inherent wisdom and evolutionary vitality, and restores to the community the power of taking control of its nutrition problems.

As Jerry Sternin put it, the positive deviance approach is "evolution times two." It takes the evolving edge of good nutritional change, not just static practices, but good change. Instead of waiting a generation for the fit to survive, it applies this evolutionary advance immediately, in a manner that speeds the capacity of the population to move forward.

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December 1998

FOREWORD

The use of the positive deviance approach has enabled communities in Vietnam and elsewhere to take responsibility for sustainably rehabilitating tens of thousands of seriously malnourished children. Equally significant, the approach has changed the conventional wisdom in communities regarding feeding, caring, and health-seeking behavior, thus **benefitting generations of children to come**.

This field guide is to a large degree the work of Monique Sternin, who pioneered the positive deviance approach to nutrition in Vietnam over a six-year period. She has spent the past year writing and testing the guide in Mozambique, Egypt, Nepal, Bhutan and Cambodia with the hope of making the approach accessible to those concerned with the problem of malnutrition in other countries throughout the world.

Obviously, knowledge is never complete, and this manual, perhaps more than others, is a "work in progress." Nonetheless, we feel that enough experience has accrued to justify broader application, even as we study and refine the model in various contexts. There is only one "Monique," so the manual is a strategy to bring her and other's insights to scale. We eagerly await your reactions, reflections, and experience in programming and in research as we move forward together.

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To the "Positive Deviants" in the villages, who taught us what no expert ever could: how it really can be done. We thank you and salute your wisdom!

The positive deviance approach to the hearth model is the result of the hard work of a dedicated and committed cadre of grass-roots development workers who sweated in the tropical sun; soaked in torrential downpours; itched with mosquito and fly bites; ached from carrying scales, pots and pans; dozed after meetings with villagers long into the night; grinned from ear to ear when growth monitoring results showed continuing decreases in malnutrition; and cried when a third degree malnourished child could not be saved. To you all, the PD pioneers in Vietnam (Hien, Tuan and Lang) and at the Schweitzer Hospital in Haiti, first and foremost, our deepest gratitude.

Next, to those of you who later took the model, changed it, improved it, made it your own and provided valuable feedback for the Field Guide: Save the Children Japan (particularly Anirudra Sharma) and Save the Children Norway, both in Nepal; AFRICARE in Tanzania; Save the Children US in Mozambique, Egypt, Nepal and Bhutan; and CARE in Cambodia, many thanks.

For those of you who read the earlier drafts of the guide book, provided sound counsel and feedback and attended the round-table in Washington (Liane Adams, Leslie Archer, Kirk Dearden, Victoria Graham, Don Graybill, Marcia Griffiths, Marguerite Joseph, Charles Llewellyn; David Oot, Ellen Piwoz, Victoria Quinn, Donna Sillin, Dirk Schroeder, and Eric Swedberg), our debt of gratitude for your role in the evolution of the final product. Thanks too to Tamer Kirolos who helped format the book.

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And finally, a special thanks to Marian Zeitlin whose pioneer work served as the catalyst for the Positive Deviance-Hearth-Nutrition model, and to Gretchen Berggren, who with her husband Warren, created the Haiti Hearth model, introduced us to the concept, and provided wise counsel and support in Vietnam during the early days of our nutrition forays, a great debt of gratitude.

Monique Stemin,
MA Cairo. 1998

Jerry Stemin, MA
Field Office Director,
Egypt Cairo, 1998

GLOSSARY

CBO	Community-based Organization (Egypt)
CDA	Community Development Association (Nepal)
DHS	District health services
EPI	Expanded Programme for Immunization
GMP	Growth Monitoring and Promotion
HV	Health Volunteers
IMCI	Intgrated Management of Childhood Illness
INGO	International Non-Governmental Organization
KAP	Knowledge Attitude Practices
LBW	Low Birth Weight
ND	Negative Deviant
MCH	Maternal and Child Health
MOH	Ministry of Health
NERP	Nutrition Education and Rehabilitation Program
NERS	Nutrition Education and Rehabilitation Session
NGO	Non-Government Organization
PD	Positive Deviant
PDI	Positive Deviance Inquiry
PEM	Protein Energy Malnutrition
RB	Redd Barna (Save the Children, Norway)
SCJ	Save the Children, Japan
SC/US	Save the Children, USA
TBA	Traditional Birth Attendant
TOT	Training of Trainers
VHC	Village Health Committee

INTRODUCTION

Purpose Of The Hearth Field Guide

For Whom?

This guide is intended for trainers, program officers and managers from NGOs and INGOs or MOH district teams or other organizations working at the grass-roots level, in partnership with the community or through community-based organizations. It has been developed to assist you in designing a community-based Nutrition Education and Rehabilitation Program in collaboration with the communities you serve.

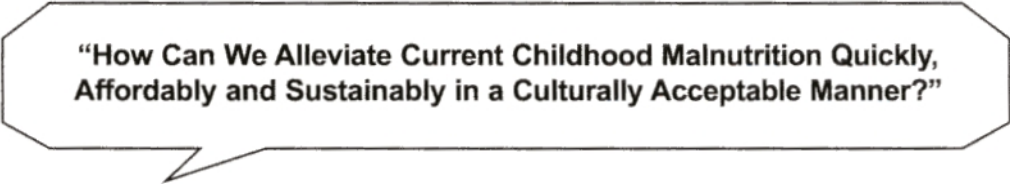
What?

More specifically this guide will help you to:

- Assess the feasibility of the nutrition program in the proposed context
- Conduct a Situation Analysis of malnutrition with the community
- Carry out a Positive Deviance Inquiry with the community
- Design a community-based Nutrition Program using Positive Deviance Inquiry findings

Why?

Malnutrition is the result of many interrelated factors such as poverty, insufficient household food security, inadequate health services, poor maternal and child care practices, and inadequate water and sanitation. For communities with a high prevalence of malnutrition, it may take years or even decades before all of these factors can be addressed. Because today's malnourished children cannot wait, grass-roots development workers need to address their plight **today** in collaboration with the community.



“How Can We Alleviate Current Childhood Malnutrition Quickly, Affordably and Sustainably in a Culturally Acceptable Manner?”

The Hearth Nutrition Model based on the Positive Deviance approach provides encouraging answers to this question.

How?

Based on the Positive Deviance approach, communities and their development partners have been able to sustainably reduce malnutrition among their young children through a Nutrition Education and Rehabilitation Program in Haiti, Vietnam and Nepal. Similar programs are currently being implemented in Bangladesh, and Mozambique. Moreover, nutritional researchers have found "positive deviant profiles" in every region (Appendix A).

Example: In Vietnam, the Hearth Nutrition Program has achieved a reduction of 2nd and 3rd degree malnutrition by 80% among tens of thousands of malnourished children under 3 years of age. Moreover the caretakers were able to **sustain the enhanced nutritional status** of these **children as long as two years beyond their participation** in the program. Of greater significance are the findings that **younger siblings of these children** and **other children in the community** who were born **after** the NERP program ended, enjoyed the same **enhanced nutritional status** as did the NERP participants.

HOW TO USE THIS MANUAL — DESCRIPTION OF CHAPTERS

Part I provides a brief overview of the use of the Positive Deviance approach which will be developed in detail in part V. It also covers the characteristics of the hearth nutrition model.

Part II deals briefly with the feasibility of piloting a Heath Nutrition Program based on your local context.

Part III outlines standard steps required to initiate a community-based Hearth Program with a focus on assessing and utilizing community resources and developing community "ownership." (If you are integrating the nutrition component within the context of other existing community-based projects, you may proceed directly to part V, "Conducting the Positive Deviance Inquiry.")

Part IV gives guidelines for assessing the health situation of young children in the proposed hearth community, including instructions for carrying out a nutrition survey and setting of program goals.

Part V focuses on positive deviance, providing background and definitions, as well as the steps required for carrying out the Positive Deviance Inquiry.

Part VI describes designing the Hearth Program based on the findings from the Positive Deviance Inquiry. It covers issues such as choosing menus, creating education messages, and promoting behavioral change.

Part VII describes other standard components of the Hearth Programs, such as growth monitoring and promotion, recording vital events and community management of the program. Other optional hearth components, such as deworming, Vitamin A distribution and Maternal and Child Health programs are also covered.

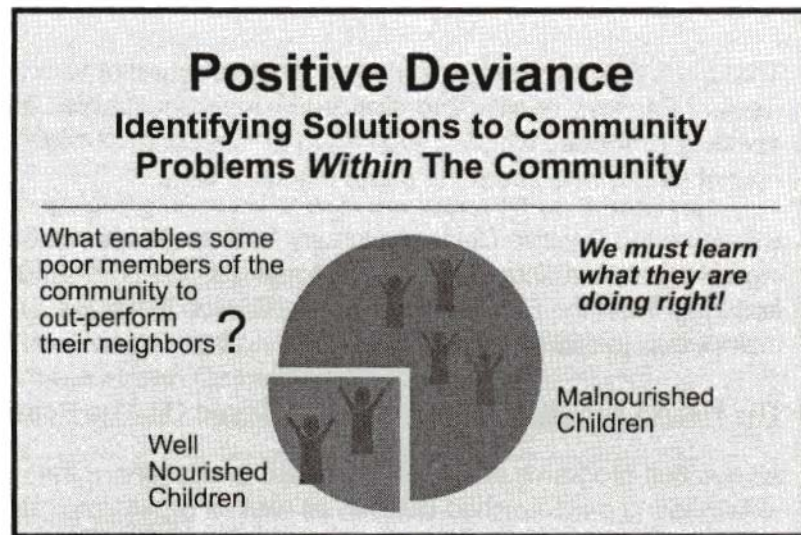
Part VIII explores the role of District Health Services in the Hearth Program, focusing on advantages and disadvantages.

PART I - OVERVIEW OF THE HEARTH NUTRITION MODEL

Positive Deviance As The Cornerstone Of The Nutrition Program

Positive deviance is a development approach that is based on the premise that solutions to community problems already exist within the community.

The positive deviance approach thus differs from traditional "needs based" or problem-solving approaches in that it does not focus primarily on identification of needs and the external inputs necessary to meet those needs or solve problems. Instead it seeks to identify and optimize existing resources and solutions within the community to solve community problems.



Through a Positive Deviance Inquiry (PDI), program staff and their community partners identify the unique practices of some community members that set them apart from others within the same community, and allow them to cope more successfully within the same

Based on identification of these successful practices, program staff and their community partners develop strategies to enable all members of the community not only to learn about these practices, but also to act upon them.

Positive Deviance Approach In Nutrition

The term "Positive Deviance," has been defined as "adaptive responses for satisfactory child growth under harsh economic circumstances such as food scarcity, while 'Negative Deviance' is described as "the failure of children to grow satisfactorily, even under good economic conditions." (Zeitlin, Ghassemi and Mansour, 1990)

Berrgren and Burkhalter note in the introduction to The Hearth Nutrition Model, (Wollinka et al. 1996):

Positive Deviance is a key concept in all of the Hearths. The concept is put to two different uses in the Hearth Programs. The first and most prominently heralded use is as a method for discovering affordable and nourishing local foods that mothers can give to their children. In Vietnam the answer was shrimp and other high-protein food from the paddies, essentially free for the taking; in Haiti it was a mixture of beans, vegetables and grains. The second use of positive deviance is as a communication method to convince mothers of malnourished children that an affordable solution exists. The meals mothers cook and feed to the children (during the Nutrition Education and Rehabilitation sessions of the Hearth) are based upon information gathered in their own communities from mothers of well-nourished children, the positive-deviant mothers.

The "Positive Deviance" approach as used in the **Hearth Nutrition Program**, identifies **poor** families who have **well-nourished children**. These well-nourished children are called "Positive Deviant Children" (PD children) and their families "Positive Deviant Families" (PD families). They are the living proof that it is possible today in the community for a very poor family to have a well-nourished child before economic improvements occur or clean water and sanitation are accessible to all.

Through a Positive Deviance Inquiry, villagers together with the program staff identify the Positive Deviant Families' special and **demonstrably successful current feeding, caring and health-seeking practices** which enable them to "out perform" their neighbors whose children are malnourished but who share the same resource base.

Based on the Positive Deviance Inquiry findings (i.e., successful feeding, caring and health seeking behaviors of PD families), the villagers and the program staff plan a Hearth Nutrition Program featuring "Nutrition Education and Rehabilitation Sessions" (NERS) to address the problems of malnutrition in their community **today**.

The Hearth Nutrition Program's Goal Based On The Positive Deviance Approach

All nutrition programs based on the hearth model share the common overall goal of **sustainably** rehabilitating malnourished children as well as preventing malnutrition in young children in the community through the discovery and promotion of existing successful child feeding, caring and health-seeking behaviors.

Goals

- To rehabilitate identified malnourished children in the community
- To enable their families to sustain the rehabilitation of these children at home on their own
- To prevent malnutrition in future children born in the community

Components Of A Hearth Nutrition Program

1- At the neighborhood level

Each month caretakers of identified malnourished children are invited to participate in Nutrition Education and Rehabilitation Sessions (NERS) for a duration of 12 days. They are assisted by neighborhood volunteer mothers (Health Volunteers). On a daily basis these Health Volunteers supervise caretakers preparing and cooking an energy-rich, calorie-dense meal which they feed to their malnourished children. As the price of admission, and as the key strategy to provide practice in new, improved feeding habits, caretakers are required to make a daily contribution of the specific positive deviant food identified in their community through the Positive Deviance Inquiry.

2- At the community level

All young children in the community participate in the Growth Monitoring and Promotion (GMP) program on a monthly or every other month basis. The Village Health Committee (VHC) also meets monthly or every other month to review the NERS (results, problems and solutions) and review vital events (deaths, births and migration). Most Hearth Nutrition Programs also include a special protocol for malnourished children who fail to gain weight, including referral for treatment to local or district health facilities.

The Hearth Nutrition Program may include additional health interventions for all young children in the community, such as periodic distribution of Vitamin A per MOH policy or bi-annual deworming, preferably at the GMP session.

In some countries, Hearth Nutrition Programs are established and implemented within the context of other programs, such as Safe Motherhood, Early Childhood Development and Water and Sanitation programs.

Main Components Of A Hearth Nutrition Program

- Identification of successful behaviors among positive deviant families through a Positive Deviance Inquiry
- Monthly or every other month weighing of all children in the target group through a Growth Monitoring and Promotion (GMP) activity
- Monthly Nutrition Education and Rehabilitation Sessions (NERS) for identified mal-nourished children and their caretakers in local kitchens
- Community management of the Hearth Nutrition Program through monthly or every other month meeting of the Village Health Committee (VHC)
- Vital events monitoring

Characteristics Of A Hearth Nutrition Program

1-Use of adult learning principles

One of the most distinctive characteristics of the hearth model is its conscious use and dependence upon adult learning and behavioral change theory to achieve program objectives. It has been widely demonstrated that groups directly involved in the **decision-making** process regarding a specific issue are much more likely to **change their attitudes and behaviors** than those who were simply informed about how their behavior should change. Alinsky (1972) Hochbaum (1960) and Lewin (1958) all noted that change requires an "unfreezing" of currently held perceptions. The Positive Deviance approach involves the community in the **discovery of successful alternatives**, (i.e., an unfreezing of currently held perceptions) regarding the conventional wisdom about child feeding, and care practices.

It is the Community Health Volunteers and Village Health Committee which analyze findings from the Positive Deviance Inquiry (positive deviant foods, care and health seeking behaviors which enable some poor families in the community to have well-nourished children) and design strategies to make those practices accessible to other families through the Hearth Nutrition Education and Rehabilitation Sessions.

Knowles (1980) posited that the adult learner **brings to the learning situation considerable life experience, learns best by doing** and requires a **safe, accepting and interactive** approach to learning.

The positive deviance approach at the core of the Hearth Program is based on the belief that "answers to community problems already exist in the community." It is the positive deviants' **"life experience,"** (i.e., demonstrably successful behaviors and practices) discovered through the Positive Deviance Inquiry, which forms the basis for the Nutrition Education and Rehabilitation Sessions (NERS).

The NERS provides a **safe, accepting environment** in which mothers can practice new behav-

iors and **"learn by doing."** The Health Volunteers learn to be interactive in their approach and elicit cultural metaphors and stories from the mothers to reinforce new habits learned at the NERS. Rather than "teaching" mothers what to feed their children, the mother's mandatory "daily contribution," (a handful of the PD food) provides them with the opportunity to actually **practice** preparing and feeding their children the new food.

Similarly, other positive deviance caring practices (i.e., hand and face washing before meals, hygienic food preparation, active feeding of children) are not only discussed at the daily sessions, but also are practiced. At the end of a two week NERS, mothers have internalized the new feeding and caring practices and continue them naturally at home. Perhaps Mark Twain best captured the objective of the NERS when he said, "Education isn't teaching people to know what they don't know. It is teaching them to behave as they don't behave."

2- Implementation framework

A nutrition program based on the hearth nutrition model can be implemented over a one or two year period in two distinct phases:

Phase 1 is the active nutrition rehabilitation period with the NERS as the main activity. Based on experience in hundreds of program communities, it takes 6 months to 12 months to complete the rehabilitation of most malnourished children in the community, at which time the Nutrition Education and Rehabilitation Session (NERS) activity is discontinued. On average it takes 2 to 3 NERS for a child to gain sufficient weight to go from below <3 standard deviations (or < -3 Z scores) to above <2 standard deviations (or < 2 Z scores).

Phase 2 is the Prevention of Malnutrition Phase: other components of the NERP continue such as the GMP program, Vitamin A distribution and deworming; and new activities are introduced or emphasized, such as Health Volunteers' home visits.

Note: The Maternal and Child Health component can be introduced (or integrated if already ongoing in the community) in either phase 1, (SCJ NERP implementation model in Nepal) or in phase 2 (SC/US NERP implementation model in Vietnam).

Comparison of NERP Implementation Plans

Implementation	SCJ Nepal	SC/US Vietnam
Phase 1 (12 months)	GMP NERS Vital events monitoring MCH Program	GMP NERS Vital events monitoring Vitamin A and Deworming Community Management of NERP
Phase 2 SC/J 12 months SC/US 24 months	GMP Vital events MCH Program	GMP Vital events MCH Program Community Management of NERP

3- Measurability of impact on nutritional status of young children

The **community** monitors the nutritional status of all NERS participants during the rehabilitation phase (Phase 1) and during the Prevention of Malnutrition Phase (Phase 2), up to 24 months beyond their participation in the NERS, through the community-wide GMP program.

This monthly or every other month activity carried out one to two years **beyond** the active rehabilitation phase enables the community to measure the sustainability of the program impact on targeted malnourished children.

4- Sustainability

The program **sustainability** is ensured by the identification of solutions to nutrition problems based on **existing** resources accessible to all community members. Involvement of local community leaders and local women volunteers also reinforce the sustainability of the impact of the program.

5- Community participation and ownership of program

The Hearth Program encourages full community participation in assessing local resources, and in designing and taking part in the program. All relevant groups in the community gain full ownership of the program through the following processes:

- Mobilization to carry out household registrations and GMP sessions
- Identification of practices which affect positively or negatively the nutritional well-being of their children
- Discovery of community-based solutions through the Positive Deviance Inquiry
- Elaboration of community-based strategies to solve community problems
- Involvement in the program as volunteers, parents of malnourished children, or
- Village Health Committee members

6- Establishment of a network of women volunteers at the hamlet level

Volunteers play a critical role in carrying out the main nutrition activities including:

- **Supervision** of regular GMP sessions
- **Management** and facilitation of the NERS
- **Home visiting** (counseling caretakers, sick children, pregnant women and post-partum mothers)
- **Monitoring** attendance and recording results of NERS

7- Focus on behavior change

The NERS focuses on **changing or promoting new behavior** rather than transferring knowledge. The program success is measured by what people do rather than what people know. Changing or promoting new behavior in the caretakers of malnourished children is achieved through the following learner-centered strategies:

- **Involving** the caretakers in modeling the good practices, i.e., "**learning by doing**" in a NERS
- **Requiring** the caretakers to make daily contribution of foods that have been identified as positive deviant foods to the NERS sessions
- **Using** peer support to encourage new habits

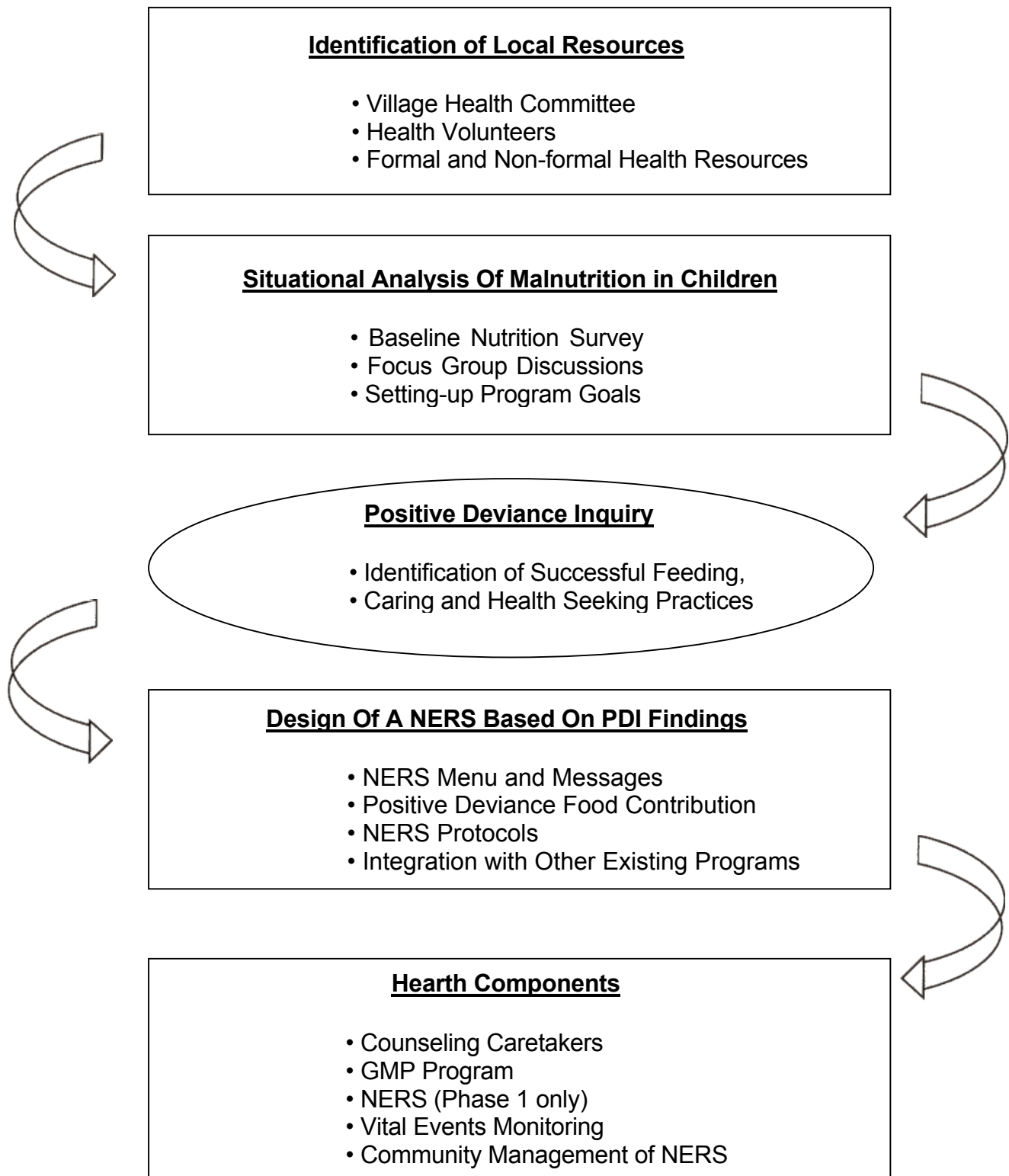
These strategies enable caretakers of young children to:

- **Gain the confidence** necessary to embrace a new habit through direct and repeated practice
- **Take responsibility** for the rehabilitation of their malnourished child through their daily food contribution
- **Continue to practice** the new habits at home because they see positive changes in the malnourished child's physical appearance and behavior usually within 2 NERS (2 months).

8- Design training

To carry out the program successfully, managers need to invest time and effort in drafting and implementing various training components. For example, the proficient implementation of a GMP program requires 3 trainings interspersed during the first 6 months of implementation. The NERS activity requires at least 3 trainings within 3 months of startup. Each training is carefully drafted to include reviews of acquired skills, improvements when needed, and acquisition of new skills (Appendix B).

Conceptual Framework for Designing a Hearth Program



PART II - ASSESSING THE FEASIBILITY OF PILOTING A HEARTH PROGRAM

To realize the full benefit from the Hearth Program a proposed site needs to meet the following criteria.

Minimum criteria for site selection

- Prevalence of PEM malnutrition among young children of at least 30%
- Availability of affordable local foods
- Availability of mothers as potential volunteers in the community
- Presence of committed leadership in the community

Assessing The Prevalence Of Malnutrition In The Area

Operational definition of malnutrition:

Underweight (weight for age) is a composite measure of stunting and wasting. It has been chosen as the measurement of PEM malnutrition in the NERP because it is the easiest to obtain and the most widely used indicator for malnutrition at the grassroots level and on MOH "Road to Health" growth monitoring cards.

Locate and Review existing information on the prevalence of malnutrition in young children (under 2, under 3 or under 5) in the area through the following sources:

Information	Location
Demographic & Health Surveys (DHS)	District Health Department, MOH
Nutritional surveys	District Health Department or other sources (UNICEF, MOH Nutrition Department)
GMP program data	DHS or local health posts, local CBOs or NGOs
KAP surveys regarding child nutrition	MOH, INGOs
Fertility rate	Provincial or District MCH Department
Child mortality rate	Provincial or District MCH Department
EPI coverage rate	Provincial or District MCH Department

Assessing the Feasibility of Piloting a Hearth Program

Scenario 1:

If you plan to **pilot** a Hearth Program in **communities where you are already involved in development projects**, and have access to recent (less than a year old) nutritional surveys from other communities in the same district indicating a malnutrition rate (weight for age) of at least 30% in the area, you do not need to carry out a sample nutrition survey at this stage.

Scenario 2:

If you need to select one or two villages within an impact area for piloting the Hearth Program, **conduct a sample survey** of the nutritional status of children under age 3 or 5 years in several villages to determine the malnutrition rate (weight for age) and to choose the most appropriate localities for the pilot program, after reviewing all the other criteria.

Note: Generally, an underweight rate of around 30% (weight for age) of the surveyed age group justifies the human and financial investment required to successfully carry out the Hearth Program. However, in a site with high population density where the underweight rate is less than 30%, but the **absolute number** of malnourished children is more than 100, the program may also be justified.

Besides high malnutrition rate, localities suitable for NERP are marginal poor rural communities with high fertility and high child mortality rates.

Availability Of Local Food

Carry out an informal market survey. Visit local shops and small markets to inventory food availability and price. Interview the shopkeeper and find out who buys the food and ask about food availability (seasonal or year-round, constant or sporadic).

Assess availability of home-grown food. Walk through the village and document the presence of home gardens and their produce (including fruit trees), and interview villagers to establish the current availability of staple food.

Unlike relief feeding programs which only aim to rehabilitate children, the NERS aims to rehabilitate and SUSTAIN the enhanced nutritional status of malnourished children through the use of **locally available food**. For this reason it would be extremely difficult to carry out the program in areas where there are prolonged (more than 3 months) periods of household food insecurity.

Availability Of Mothers As Potential Volunteers In The Community

The program relies on the presence of mothers as volunteers to teach or provide peer support to caretakers of malnourished children. Therefore, the presence of women in the community who are willing to give some of their time for community activities is critical. More specific criteria are presented below.

Identify existing grass-roots level women's associations or clubs and discuss the topic of volunteerism with them. Assess their interest, willingness and availability to be potential "volunteers."

Identify existing community-based, government female health workers or volunteers.

Note: Because many women "volunteers" are poor, some Hearth Programs provide them with a small stipend to compensate for lost income resulting from their volunteer activities.

Presence Of Committed Leadership In The Community

During meetings and conversation with community leaders including, but not limited to, government and religious leaders, school directors and local NGO personnel, look for statements of genuine concern for the children's health situation in the community as well as the expressed desire to improve it. The implementation of the program relies on the commitment and participation of the leadership which would be difficult to elicit if they do not perceive malnutrition to be a problem in their community.

Because the Hearth Program requires the participation of many people (caretakers of malnourished children, women volunteers, teachers) in community-wide activities such as Growth Monitoring and Promotion program and Nutrition Education and Rehabilitation Session, it is critical that the leaders of the community (religious and/or secular) give their full support to the program. Their support will be critical in the areas of community mobilization, decision-making and arbitration.

Note: Among the criteria listed above, the prevalence of malnutrition should assume a very high priority among the criteria in your selection process. **The NERP is designed for communities with high levels of malnutrition in young children.**

Example of decision making criteria

Main Criteria	YES	NO	Comments
Prevalence of malnutrition around 30% of < 36 month old children in the area.	X		
Availability of local foods	X		Seasonal variety
Availability of mothers as potential volunteers		X	Seasonal unavailability due to workload (planting and harvest); low literacy
Presence of committed leadership in the community	X		Especially the local CDA*

*Community Development Agency

PART III - PRELIMINARY STEPS: GETTING STARTED

Now that you have selected your pilot sites, remember that the success of this program will depend on a strong partnership between you and the community.

Tips to build good partnership with the community

Before each visit to the community

Share with other team members the purpose of the visit(s) to the community.

Develop a short presentation about the purpose of each visit.

Practice your presentation with your team, and improve your presentation based on feedback from your team.

Review with team members the information you are trying to collect, as well as the tools you may use to collect the information (assessment forms, questionnaire, check lists).

Inform the village leader or community chief of date and time of your visit to discuss the program.

During each visit to the community

Try always to meet and greet even briefly the leaders or the village chief

Discuss the purpose of your visit and what activities you would like to do and why.

Make arrangements for next visits: whom you need to meet, date and time.

Step 1 and 2 (below) may require multiple visits to the community.

Step 1: Assessing Community Organizational Resources With Your Local Partner

Meet with the village leaders and other key community members to discuss the following topics:

1. The health situation in the community, especially children under five years of age
2. The creation of a Village Health Committee if no such organization exists, or an expansion of another existing village committee to include new members, particularly women volunteers. The role of such a committee would be:
 - a) To manage and coordinate health activities at the local level
 - b) To set criteria and select and supervise women volunteers
 - c) To collaborate with the agency implementing the Hearth Program and with appropriate district health personnel

Key community members include:

- Hamlet leaders or chiefs
- Teachers
- Members of the formal health sector (if any)
- Members of the informal health sector (traditional healers, TBAs, local medicine vendor)
- Religious leaders, tribal or caste leaders
- Local groups, clubs, associations involving women, and NGOs
- Individuals recognized by the community as opinion leaders, decision-makers, and local "heroes"

Step 2: Identifying Community Health Resources With Your Local Partner

Identifying private, non-formal and public health sector resources is critical to the success of the Hearth Program, initially as a source of needed information and later for provision of services. For

example, children who are identified at GMP sessions as 3rd degree malnourished will need to be referred to the local health post. Decisions regarding universal deworming, protocols for Vitamin A distribution, and appropriate content and reinforcement of health messages at NERS, all require close linkages with community health providers.

Example from Vietnam

Type of health providers in each village:

Commune	Health Center	TBAs	Traditional Healers	Drug Vendors	Retired Health Providers
Ngoc Linh Pop. <3428	3 Midwives Assistant Doctor Head of Health Center	3	6	2	7
Tan Dan Pop. <3232	3 Midwives Assistant Doctor Head of Health Center	1	0	3	3

1-Private and non-formal health sector resources

Identify the individuals involved in the non-formal health sector, especially the Traditional Birth Attendants(TBA), traditional healers and drug vendors. These individuals are in many instances the only health resource available to local people, and are often the first consulted by caretakers when their child falls ill. The villagers often trust and respect traditional healers who also maintain and shape the caretakers' health-seeking practices.

Meet with them separately and ascertain the number of sick children they treat per month and for what ailment.

Make sure to use local dialect terms when referring to illnesses as names sometimes vary from region to region, or district to district, or even village to village.

Who	#	Activities/treatments or ailments	# Children/ month	# Clients/ month
TBAs				
Traditional healers				
Retired health personnel				
Others: (drug vendors, quacks)				

2- Public health sector resources (if available)

Meet with public health staff at the health facility. After introductions and explanation of the purpose of visit, assess the human and infrastructure resources.

Identify each health worker's job and work schedule, extension activities, if any, and the type of currently available services and health activities for children and women (for example, EPI including tetanus vaccination for pregnant women, IMCI, Vitamin A distribution campaigns, deworming campaigns).

3- Public health sector services

Existing health services	Yes	No	Schedule	Comments
Immunization First Aid Curative care Health education Environment sanitation Antenatal care Deliveries Malaria treatment MCH services Family Planning GMP IMCI				

Visit the health facility (including latrines) and assess cleanliness and availability of clean water and soap. Do a quick inventory of essential medical equipment, supplies and medicines (such as working refrigerator, syringes, needles, and common life-saving medicines [cotrimoxazole, Fansidar, for example]).

Step 3: Helping The Community Select Mothers To Become Volunteers

Once the Village Health Committee (VHC) has been organized, meet with its members to carry out the following activities:

Make a map of the community. The purpose of this activity is two-fold: to identify **all** households, especially those at the periphery, and to guide the selection of volunteers who can serve all corners of the community.

Select candidate volunteers from all neighborhoods to ensure better coverage. Health Volunteers must be selected from each hamlet or neighborhood, or any unit which forms a homogenous community. They are responsible for up to 60 households. If a hamlet has more than 70 households, 2 Health Volunteers may be needed.

Describe tasks that Health Volunteers will be trained to perform. These include, but are not limited to:

- Weighing children and plotting their weight on growth chart
- Buying food (optional) and preparing it according to the set menu

- Supervising caretakers in processing food, cooking meals and feeding their children at NERS
- Teaching simple messages to mothers or other caretakers of malnourished children
- Keeping records (children's attendance, progress, food purchase)
- Reporting to the Village Health Committee

Develop criteria for selection of women volunteers with the Village Health Committee. Be cautious about selecting volunteers who are close relatives of village leaders, unless they are qualified. Criteria for selection vary from country to country but usually include:

- Willing to work as a volunteer
- Married woman with children living in the hamlet
- Respected and trusted by the community
- Can read and write (preferably 3 to 6 years of schooling)
- Eager to learn, open to new ideas

Example: Criteria for HV selection: Save the Children, Japan (Nepal)

- Female, between 18 to 40 years of age
- Able to speak local dialect fluently
- At least 8 years of schooling
- From same Village Development Committee (VDC)
- Willing to work as a volunteer with a small stipend
- Accepted by the community
- Married and from a disadvantaged community/neighborhood
- Priority for selection given to trained government health volunteers

Step 4: Selecting a Local Nutrition Resource Panel

Marian Zeitlin suggests creating a Local Nutrition Resource Panel to strengthen the validity of the Positive Deviance Inquiry without increasing the size of the sample. Once the community volunteers have been selected, invite two or more experienced local professionals (local clinic doctors and/or wise grandmothers) to form the panel. Select health/nutrition workers, professionals or educated older women who are themselves positive deviants in that they already understand many of the nutrition problems of their community and the ways in which poor positive deviant families successfully cope. The purpose of the panel is to enhance the quality and validity of the Positive Deviance Inquiry, described in Section V.

The Panel will be "silent participants" during the focus group meetings, and discussions with volunteers and Village Health Committee on causes of malnutrition in the community (described in Section IV). Their "silence" during these meetings will not only enable them to be excellent, active listeners and recorders, but also will not interfere with the process of community discovery, central to the positive deviance approach: learning from community members (positive deviants) to solve nutrition problems with resources already existing in the community. The panel's role is detailed in Part VI, Step 4 and Part V, Step 1.

PART IV - CONDUCTING A SITUATION ANALYSIS OF MALNUTRITION WITH THE COMMUNITY

Step 1: Reviewing The Health Situation Of Young Children With Local Health Staff

Discuss and Identify the most frequent illnesses among young children treated at the health center which usually include those listed below (request to look at the treatment registry).

- Diarrhea
- Acute Respiratory Illnesses (ARI)
- Worms in young children
- Other common childhood diseases in the community (measles, malaria, tuberculosis, hepatitis, anemia, Vitamin A deficiency-night blindness)

Review EPI activity schedule and coverage (Coverage rates are rarely available at the village level since the activity is usually carried out by the **district** EPI mobile team, and data kept at the **district** EPI and epidemiology department.).

Identify levels and causes of under-5 child mortality. Seek both the "medical cause" (i.e., diagnosis) and the "system cause" (i.e., late care-seeking, unavailable or low quality care).

Create community "case histories" which document actual deaths of children under 5.

Identify usage of health facility by the community by reviewing the attendance log for the past week or past month. This information will give you an idea of the villagers' confidence in the public health workers and, to some extent, an indication of the perceived quality of care.

Discuss the prevalence of malnutrition and perceived causes of malnutrition in young children.

Step 2: Carrying Out A Nutrition Baseline Survey Of Young Children

A. Preliminary steps:

Because the Hearth Program is a resource-based program, you will want, to the extent possible, to use survey tools which are already available and being used in the district or nationally.

The growth chart:

Select the most widely used weight for age growth chart in the country or the one currently in use in the district. The most frequently used is the MOH/UNICEF growth chart. It will enable you to compare survey results with those of the district at large.

Use scales that are available in the country and easy to use (UNICEF digital scales or Salter scales). Remember to order enough scales to cover your needs for the whole pilot phase.

B. Before the survey, at community level:

Select the target group in collaboration with the VHC and in some cases the District Health Department. Malnutrition rates are usually the highest among children 6 to 24 months of age with consequences that persist throughout life, hence you must include at a minimum all **children under 2 years of age** in any nutrition intervention. Other considerations for determining the target group are:

Conducting a Situation Analysis of Malnutrition with the Community

- Total number of children in a given age group in the hamlet
- Ratio of number of children per volunteer
- The target group set up by the MOH guidelines for GMP
- Integration with other existing health activities in the community (EPI, PHC)
- Community capacity to implement the program

Example: Target age groups in current Health Programs include: children 12 months to 59 months (Haiti), 6 months to 23 months (Bangladesh), under 36 months (Vietnam, Mozambique), under 60 months (Nepal).

Identify all children in the target group. This can be done in different ways. The best way is to conduct a household registration of all families in the community. Another way is to register all families with children in the target group.

Enlist and train or retrain local health workers and/or Health Volunteers in weighing children, plotting and interpreting the growth chart, with particular emphasis on techniques to determine date of birth. The training curriculum, which is exactly the same as used for the GMP, should also include training in interpersonal skills and counseling to provide appropriate feedback to the family on the current nutritional status of the child.

Explain to the community leaders the purpose of the nutritional survey and get their consent and cooperation.

Identify and agree with community leaders on the number of weighing sites to ensure that **ALL** children in target group will be weighed.

Create a roster of the children to be weighed with proper **identification and addresses** i.e., location of housing. The roster will also include each individual child's **nutritional status** i.e., normal, mild, moderate or severe based on the growth chart and birth ranking as well. This list is very important, as it will enable the community and its partners to identify positive deviant children for the Positive Deviance Inquiry.

Name of Village: _____ Name of Hamlet or Cluster: _____ Name of Local Chief or Leader: _____ Name of HV or weigher: _____ Date of weighing: _____								
Child's Name	Father's/ Mother's Name	Birth Rank	F/M	DOB M/Y	Age in mths	Weight	Nutritional Status	Comments
1.								
2.								
3.								
4.								
5.								

Conducting a Situation Analysis of Malnutrition with the Community

C. During the survey:

Involve community members in the nutrition survey itself, especially health volunteers. If community members are unable to do the actual weighing and plotting, they can mobilize their neighbors and provide logistical support at the weighing sites.

Copy the necessary information on each child in the roster book at each weighing site.

Ensure that each family is informed of their child's current nutritional status on the spot (after plotting the weight on the growth chart).

Include (optional) 1 or 2 questions for caretakers, during the survey, on diarrhea prevalence, breast-feeding or complementary feeding as a baseline (Example: Has your child had an episode of diarrhea in the last 2 weeks? i.e., 3 or more loose stools per day).

D. After the survey:

Tabulate results for each hamlet or neighborhood (sometimes called cluster) from the roster, using the coding for level of malnutrition used in the growth chart (i.e., Vietnam - A, B, C, D categories; Nepal- green, yellow, orange and red).

Name of Village:		Tuy Loc					
District:		Hau Loc					
Province:		Thanh Hoa					
Date of survey:		January 1996					
Name Hamlet (Cluster)	Total # children < 3	# of children weighed	Normal (A)* # %	1st degree (B)* # %	2nd degree (C)* # %	3rd degree (D)* # %	Total B,C,D # %
Hamlet 1	48	48	17 36	11 23	18 38	2 1	31 65
Hamlet 1	59	58					
Hamlet 1	37	37					
Etc.							
Total	372	369	128 35	110 30	126 34	5 1	241 65

*A > -2 Z; *B > -3Z and < -2Z; *C > -4Z and < -3Z; *D < -4Z

Step 3: Identifying Current Feeding Caring and Health Seeking Practices In The Community

Identifying current practices in the community serves two purposes. First, it will enable you to understand the "norm" or "conventional wisdom" regarding caring, feeding and health-seeking practices in the community. When you can't out the Positive Deviance Inquiry, it will enable you to identify those behaviors or practices the positive deviants demonstrate which are **different** from the norm. Secondly, it will also serve as a **qualitative baseline** against which you can later document changes in feeding, caring and health-seeking practices as a result of the program.

Carry out focus group discussions to identify norms regarding child feeding, child care and child health care in the community.

Conducting a Situation Analysis of Malnutrition with the Community

Topics to explore in focus group discussion with mothers include:

- Breast-feeding practices
- Complementary feeding practices
- Workload
- Child caring

Topics to explore in focus group discussions with mothers and **other caretakers** as your cultural context dictates:

- Beliefs regarding child-rearing
- Perception of causes of malnutrition in children
- Health-seeking practices in the community

Review and adapt the sample questionnaires (see Appendix C) on malnutrition to your cultural and local context.

Keep a record of what you have learned about the local feeding, caring and health-seeking customs and beliefs.

Tips for facilitating group discussion:

- Choose an informal setting
- Create a congenial atmosphere
- Respect the group's ideas, beliefs and values
- Listen carefully and show interest in participants' responses or exchange
- Encourage everyone to participate in the discussion
- Be observant and notice participants' level of comfort or discomfort
- Ensure that every one can voice their ideas or opinion

(See Appendix D: Results of Situation Analysis conducted in Nepal by SCJ)

Step 4: Assessing The Nutrition Situation Of Young Children With The Community

The community needs to acknowledge the nutrition problem and understand its causes in order to identify solutions from within the community to address it. Therefore:

Organize a meeting with the Village Health Committee and the Health Volunteers and outline the purpose of the meeting:

- To explain what malnutrition is
- To report the results of the community's nutrition survey of young children
- To identify causes of malnutrition in the community
- To review the objectives for a nutrition program

Explain to participants the 3 conventional grades of malnutrition: mild, moderate and severe, with visual aids (pictures, real children from the village, the growth chart).

Describe physical and behavioral symptoms of malnutrition in the young child. Highlight the fact that mild malnutrition often does not have visible symptoms and that regular weighing or growth monitoring is the only way to establish the nutritional status and growth pattern of the child, i.e., normal, faltering or malnourished.

Explain both the short-term and long-term adverse effects of malnutrition on young children.

Conducting a Situation Analysis of Malnutrition with the Community

Report on the nutritional status of the children weighed during the most recent nutrition survey using the 3 grades of malnutrition, indicating how many children are well-nourished, and how many suffer from mild, moderate and severe malnutrition.

Explore causes of malnutrition with the VHC and HVs from the information gathered during focus group discussions with different groups. Help the VHC and HVs focus on current factors and practices that contribute to malnutrition in their young children. See examples of good and bad feeding, caring and health seeking practices in the following section on Positive Deviance Inquiry.

After completing the community assessment, have the Nutrition Resource Panel meet to draft their version of the forms (below), based on their own experience and additional information they may have learned during their participation in focus group sessions and meeting with volunteers and Village Health Committee. These will be used later as a cross-check against the findings from the Positive and Non-Positive Deviance Inquiry described in Part V.

Qualitative Assessment of Successful Practices of Poor Families with Well-Nourished Children (Appendices E-1 and E-2)

Good Feeding Practices	Good Caring Practices	Good Health Seeking Practices

Qualitative Assessment of Poor or Harmful practices of Poor Families with Malnourished Children

Poor Feeding Practices	Poor Caring Practices	Poor Health Seeking Practices

Set up program goal with the VHC and HVs and make sure they actively endorse them.

Conducting a Situation Analysis of Malnutrition with the Community

Example of program goal from Nepal (SCJ):

- To rehabilitate children under 3 suffering from moderate and severe malnutrition (weight for age, standard Gomez classification)
- To maintain the enhanced nutritional status of these children at home after rehabilitation
- To prevent malnutrition in young children

Example of program goal from Vietnam (SC US):

- To rehabilitate identified malnourished children in the community
- To enable their families to sustain the rehabilitation of these children at home
- To prevent malnutrition in young children in the community

PART V - CONDUCTING THE POSITIVE DEVIANCE INQUIRY

Background Information

The positive deviance approach in nutrition enables the caretakers of malnourished children to rehabilitate them by adopting identified successful behaviors which poor families with well-nourished children are practicing today in their community. These successful behaviors or practices are identified through a Positive Deviance Inquiry.

Definitions for Positive Deviance Inquiry:

Positive Deviant Child (PD child): well-nourished child who belongs to a poor or very poor household. (Definitions of poverty are extremely relative and vary from community to community, hence the term "poor" or "very poor" is used as defined by the local community.)

Positive Deviant Family (PD family): poor or very poor family which has a well-nourished child.

Non-Positive Deviant Child (NPD child): malnourished child from a poor family in the same neighborhood as the PD family.

Non-Positive Deviant Family (NPD family): poor family with a malnourished child who lives in the same neighborhood as the PD family.

Positive Deviance Inquiry (PDI): an assessment to identify the successful feeding, caring and health-seeking practices of some poor families with well-nourished children.

PDI team: selected staff from the NGO, sometimes District Health Service staff.

Positive Deviant Behavior. a successful behavior or practice displayed by PD families which is unique or not normally practiced by the majority of caretakers in that community, which contributes to keeping the young child healthy.

Positive Deviant foods (PD food): nutritious foods that poor or very poor families feed their children, which are not traditionally or normally fed to young children in the community.

By using these operative definitions the implementers are able to identify successful child feeding, caring and health seeking practices which are accessible to almost ALL members of the community, including the very poor.

Process Of The Positive Deviance Inquiry

Identify poor families with well-nourished children (PD families).

Compare these PD families with equally poor neighboring families with malnourished children (NPD families).

Discover the **successful feeding, caring and health-seeking practices** which are likely to enable the PD families to **have well-nourished children**.

Identify harmful practices or lack of good practices among NPD that are likely to contribute to their children's malnutrition.

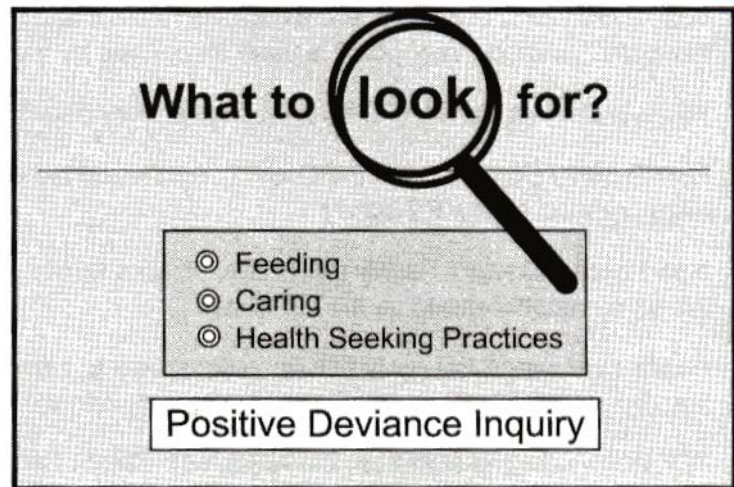
Choose from the successful practices those that are accessible today to all members of the community.

Use these practices as the basis for designing a Hearth Nutrition Program.

Note: In some Hearth Nutrition Programs, the Positive Deviance Inquiry compares practices among PD families with families with **higher socio-economic standard** who have a **malnourished child (Negative Deviant families)**. The purpose of choosing Negative Deviant families for the PDI is to demonstrate to community members that wealth does not necessarily guarantee good child nutrition. For purposes of clarity and simplicity the PDI described below compares PD families with NPD families.

Outline of the Positive Deviance Inquiry

The PDI is conducted in a village by trained staff from the implementing organization (the district health services, the local partner agency or NGO) with the participation of the Village Health Committee members, Health Volunteers and local members of the formal and informal health sector. The PDI consists of home visits to identified PD families and NPD families. During the home visits, the PDI team conducts a guided interview with family members and makes various observations. Ideally, home visits occur at mealtime to **observe** feeding and caring interactions between the child and the mother, as well as with other family members.



The Spirit of the Positive Deviance Inquiry

The PDI often requires a transformation on the part of the PDI team members, demanding different skills and attitudes than they may be used to. This change is often difficult for health providers who are educated and confident in their knowledge. They may believe they "know the answers" to community nutrition problems and can readily provide solutions to villagers. (For tips on ways to remedy this potential pitfall, read chapter 1 in "Helping Health Workers Learn" by David Werner and Bill Bower).

The PDI, however, requires team members to relinquish their knowledge and professional status as TEACHERS to become LEARNERS, willing to learn from people who are poor and illiterate. They must move from a position of power and control to a position of humility, embracing the belief that there is indigenous wisdom in community people as well as unique coping skills which ensure their survival in very difficult situations. The PDI is not a quantitative scientific study, but a qualitative search for hidden solutions, "a treasure hunt" to discover or uncover unique and successful ways by which individuals manage at the edge.

Selection of the PDI team

The outcome of the PDI depends almost entirely on the ability of the PDI team to DISCOVER the "successful special behaviors" of some local poor families. Therefore the selection of the PDI team requires special attention. Lessons learned from failed PDIs point to certain necessary characteristics in the individuals to be involved in the PDI. Team members do not need to be chosen exclusively from the health sector. On the contrary, experience proves that staff from other disciplines, like water and sanitation workers or agriculture extensionists, are often better suited to participate in the PDI because of their knowledge of the local people, their openness and willingness to learn from them.

Criteria for selection of staff to participate in the PDI

- Experience in working with communities
- Good communication skills
- Fluency in the local language
- Flexibility and open-mindedness
- Willingness to learn from non-specialists
- Demonstrated respect for local people
- Interested in child feeding, caring and healthseeking issues at the community level

Participation of District Health personnel

Although desirable in the design stage of the program, participation of district health personnel in the PDI may jeopardize its outcome as their contact and experience with communities is often very limited.

Training of the PDI team in conducting the PDI

Because the PDI is at the center of a Hearth Program design, it is essential that the PDI team be well trained and prepared. On average, a training for the PDI will take 2 days. In designing the PDI training, include the following two components.

1. The identification of household practices which contribute to or compromise good nutritional status of local children. These often include practices of which the PDI team members may be unaware, or whose contribution to the well-being of young children they may greatly underestimate. Hence, an objective of the training is to enable the PDI team members to discover these practices and their significance. The training activity consists of having trainees interview parents of well-nourished children as well as parents of malnourished children in their neighborhood without telling them what to look for (blind interview). This process enables them to discover by themselves what behaviors affect positively or negatively the young child's health.
2. The acquisition of good observation and interview skills with special emphasis on probing and active listening skills through practice of role plays. (See Appendix F, Standard Curriculum for the Training of Trainers.)

Tips for working with the community

- Develop trust among the community.
- Be flexible.
- Allow yourself and others to experiment.
- Celebrate mistakes for the opportunity they provide for learning.
- Do not take information at face value. Pursue the facts as they are, not as people would wish them to be.

Conducting the Positive Deviance Inquiry

- Deal with reality. Concentrate on what is, not on what should be.
- Be realistic in your expectations.

The Methods Used To Carry Out The PDI: Household Observations and Guided Interview

A combination of questions and observation techniques during home visits will enable you to identify the families' feeding, caring and health-seeking practices.

Observation

Direct observation is the most useful way to gather information on specific practices used by Positive Deviant and Non-Positive Deviant families, particularly if home visits occur during meal-time. Good observation allows you to assess whether **knowledge** of a good hygiene habit (like washing hands before eating) is actually **practiced**. Observations will confirm or contradict what the people say during the interview.

Observing is not a passive activity but involves all our senses, i.e., seeing, hearing, touching, tasting and smelling. Observations should include **sites** like the families' living and cooking quarters, **activities** like cooking, **interactions** like a mother feeding a young child, **situations** like a child refusing to eat.

Before conducting the PDI, **develop** an observation check list according to your cultural and local context with the PDI team. (See a sample Standard Observation check-list in Appendix G-1.)

(Optional) Design your own observation worksheet form to note specific practices or behavior, like active feeding or hygiene practices. (See a sample of recording observation form in Appendix G-2.)

Guidelines to develop good observation skills

- **Have** a clear objective for your observation.
- **Prepare** a checklist of what you want to observe.
- **Share** the checklist with the other participants and encourage input.
- **Be specific** in your observations, i.e., the child ate **3 spoonfuls** of the porridge.
- **Look** critically (a **covered** water container, a **well-kept** home garden).
- **Note** people's general demeanor, moods, and other non-verbal communication.

Guided Interview:

The purpose of the guided interview is to learn from the selected PD and NPD families, present practices which affect the well-being of their children. Hence, the guided interview is a critical tool on which the successful outcome of the PDI depends.

The guided interview takes place during home visits and involves direct questioning and open-ended discussion with mothers, other child caretakers and present family members in their homes. The guided interview is conducted by one interviewer, with another person recording the answers in a notebook. The same questionnaire is used to interview PD and NPD families, or if included, in the PDI Negative Deviant families.

The interview is based on a five-part question guide (Appendix H):

Conducting the Positive Deviance Inquiry

- I Background information on the child and family
- II Child feeding practices
- III Child caring practices
- IV Health-seeking practices
- V Questions to other family members

Adapt the standard questionnaire to fit your local cultural context.

Design Part V of the questionnaire (questions to other family members):

Decide whom to interview besides the mother according to cultural norms. Select topics relevant to the person interviewed. For **mother-in-law/grandmothers**, inquire about introduction of complementary feeding, what foods are good for young children, what foods are not good, role in deciding child's diet, home treatment of the sick child, and diet of the sick child, for example. For **fathers**, ask about their role in child raising and feeding, and seeking help when the child is sick, for example.

Examples:

- In Nepal, the mother-in-law decides on the menu for the daily meals for all family members.
- In Mozambique, the maternal uncle of a young child is the most important person after the mother.

It is highly recommended that the PDI team practice the questionnaire a few times beforehand to be thoroughly familiar and comfortable with the questions, the communication skills of probing and active listening, and the recording process.

Summary of the Steps For Conducting A Positive Deviance Inquiry

Step 1: Planning the PDI with the community

<p><u>Activity 1:</u> Introduce Positive Deviance to the community.</p>	<p>Review nutrition survey results. Review the short term & long term effects of malnutrition. Review the program goals. Identify the presence of Positive Deviant children. Explain the purpose of visiting PD families. Identify PD children & select 4 PD families from the baseline survey roster. Identify NPD children and select 4 NPD families from the baseline survey roster.</p>
<p><u>Activity 2:</u> Review the participants' tasks to conduct the PDI.</p>	<p>Create home visit teams (4 people per team on average). Review the observation checklist and guided questionnaire with participants. Explain the trainers' tasks (interviewing and reporting). Explain the participants' tasks.</p>

Conducting the Positive Deviance Inquiry

<p>Activity 3: Review logistics for home visits.</p>	<p>Decide on number of home visits per team per day (usually 2 visits per day). Schedule home visit (at meal time if possible). Ask selected families' permission to visit them.</p>
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Step 2: Conducting the PDI/home visits of PD and ND families

<p>Activity 1: Conduct family interviews at home.</p>	<p>Carry out the interview and record information gathered through observations and questionnaire. Allow flexibility in time frame, minimum 3 hours per visit.</p>
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Step 3: Selecting and documenting key successful practices from the PDI findings

<p>Activity 1: Compile the information on PD and ND families.</p>	<p>Compile information on each family on flip charts following the model matrix used for recording information during the PDI.</p>
<p>Activity 2: Select key practices from PD families that are accessible to all caretakers in the community today.</p>	<p>Identify PD nutritious foods, "good foods," and the PD families' successful feeding, caring and health-seeking practices.</p>
<p>Activity 3: Summarize composite findings for successful practices as well as poor or harmful practices.</p>	<p>Make a matrix with 3 columns, summarizing the key successful feeding (Good Food), caring (Good Care) and health-seeking (Good Health) behaviors found in the community. Write positive deviant and negative deviant case studies as illustrations.</p>
<p>Activity 4: Provide information on the results of the PDI to the community.</p>	<p>Illustrate findings with a poster for the community. Investigate ways to communicate findings to the community. Design a sample menu using PD foods with the VHC.</p>

■ STEP 1: PLANNING THE PDI IN THE COMMUNITY

Note: In all interactions with villagers, PDI is simply called "Home visits to poor families with well-nourished children." Similarly Positive Deviant children are referred to as "well-nourished children from poor families," and Non Positive Deviant children as "malnourished children from poor families." (If Negative Deviant children are included in the PDI they should be identified as "malnourished children from better off families".)

The content of this section can either be included at the meeting in the community where the nutritional situation of young children is assessed, (see page 19) or conducted in a separate, subsequent meeting.

A. Introduce Positive Deviance to the VHC and Health Volunteers

At the meeting with the VHC members and Health Volunteers, review the following:

- The results of the nutrition survey
- The number and percentage of children who are malnourished
- The short- and long-term effects of malnutrition
- The objectives of the Hearth Nutrition Program

Identify Positive Deviant children in the community. Highlight the fact that there are **a certain percentage of well-nourished children in the locality**. Ask VHC members and Health Volunteers to look at the roster of children weighed during the survey and **determine if any of the well-nourished children come from very poor households. If "YES," highlight the discovery that according to their survey, it is possible today for a poor family to have a well-nourished child.**

Sample dialogue between Trainer (T) and VHC members (V) to introduce the Positive Deviance Inquiry

T: Why are we here?

V: To discuss ways to make our malnourished children healthy.

T: Let's look at the results of the nutrition survey. How many malnourished children do you have?

V: Two hundred or 40% malnourished children.

T: How many well-nourished children do you have in your community?

V: Three hundred or 60% well-nourished children.

T: Now let's look at the list of children who are well-nourished. **Are there any well nourished children who come from a poor or very poor family?**

V: Yes!

T: (With great surprise) **You mean, it is possible for a very poor villager to have a well-nourished child today in your community?**

V: Yes!

T: **Then, let's go and visit them to discover what they are doing to have a well-nourished child despite their poverty. Then we can learn from them how to solve our malnutrition problem using solutions that are already here in the community. Let's go and find out what are the special good food and feeding practices, the good child care, and the good health care practices they use which contribute to their child being well-nourished.**

The importance of the "discovery" that there are some well-nourished children among the very poor families in the community cannot be stressed enough! Since the entire program, including NERS menus and mothers' contributions, will be based on the successful behaviors or practices identified during the PDI, it is critical that the community understands its significance.

Explain the purpose of the home visits to the participants: (1) to discover the successful feeding practices (**good food and feeding practices**); the successful child caring practices (**good child care**); and the successful health seeking practices (**good health care**) that enable some poor families identified in the survey to have well-nourished children, and (2) to discover the harmful practices or lack of good feeding, caring and health-seeking practices that contribute to malnutrition in other children from the same poor neighborhood.

Identification of PD and NPD families

First, have the VHC look for all the well-nourished children on the baseline survey results roster. Then ask them to circle or underline the name of those well-nourished children who belong to a poor or very poor neighborhood according to local poverty criteria. (See example of poverty criteria below.) Then request the VHC to identify NPD children living in the same neighborhood.

Selection of PD families and NPD families for the PDI

Review the common selection criteria for PD and NPD children and families with VHC.

Common Criteria for selection of PD and NPD families:

- The child must belong to the target age group (6-23, 6-35 or 6-59).
- The child must belong to a family with a minimum of 2 children.
- The 6 families should be representative of geographical (lowlands, coastal or highlands areas) occupational (farmer, fishermen, tradesmen) and social (tribe, castes) groups living in the village.
- The family with the PD child should have no severely malnourished children.
- The family of the PD child should have no severe or untypical social or health problems.
- The PD or ND children must be well at the time of the visit.
- The PD child should not be a very big baby who is losing weight now.
- The ND child should not be a very small low birthweight baby who is growing well now.
- The PD child should not have a food begging or scavenging personality.

Review additional considerations to select NPD children. Through brief interview with present caretakers, ensure that the assessed malnourished status is not due to low birth weight (LBW) or premature birth, physical or mental handicap.

Sort out children and families accordingly, then have the VHC select 4 PD and 4 NPD families accordingly.

If Nutrition Resource Panel members can unobtrusively make informal home visits to the families selected, they may identify conditions missed by the volunteers or VCH which could invalidate the information potentially obtained from these families. In this case another family which meets the criteria should be selected by the HVs and VCH.

(Optional) Use of wealth ranking to identify and select PD and NPD families.

Ask villagers to make a list of poverty indicators according to their village standard, such as type of housing, occupation, ownership of land, possession of consumer goods.

Example: In Vietnam, Quang Xuong district, lowland farming area, poverty was defined as follows:

- Number of months per year the family went without rice (minimum 2 months)
- Mud house with straw roof

- No kitchen building
- Mud courtyard
- Sharing source of water with other families

B. Review the tasks to conduct PDI (home visits)

Participation of villagers

Form teams of 3 to 4 people to visit individual families. For example, in addition to the 2 members of the PDI team, request the presence of 2 VHC members who know the neighborhood well and can guide you to the families.

Review the purpose of home visits and explain the tools used to carry out the PDI. Review the observation check list and questionnaire with the extended PDI team(s).

Decide jointly individual members' roles. The 2 member PDI team conducts the guided interview with the family and takes notes. All the team members observe the setting and the interaction between members of family, listen to the interview and help the communication between the interviewer and the family members when necessary.

C. Review logistics for home visits

Whenever possible, each team should complete 2 home visits, preferably with a PD family and a NPD neighboring family.

Allow time for VHC members to meet the selected families to explain the purpose of the home visit and secure their permission to be visited. It should be made clear to the families that they do not need to prepare for the visit. Should the timing of the visit be unsuitable for the family, an alternative date should be considered. In some cultural contexts it may be extremely difficult to secure permission for a visit to the PD family since it may bring them some trouble (evil eye). In such cases it will be necessary to find culturally acceptable ways to gather the necessary information from PD families. For example, Health Volunteers may not publicly distinguish between PD and NPD families, but rather keep those classifications private. They would then approach PD families and merely say, "We are visiting several families in the community to learn about nutrition and wonder if you would be willing to talk with us."

Plan to conduct the home visits around **meal times**.

Consider distance to household or between households to visit.

Allow a minimum of three hours for each family visit.

■ STEP 2: CONDUCTING PDI (HOME VISITS) AMONG PD AND ND FAMILIES

Establishing a friendly relationship with the family is key to the whole PDI process of the home visit. It facilitates the interview and will enable the mother and/or other family members to relax and respond more completely and accurately.

Tips for participants during PDI

- Be polite and respectful at all times.
- Follow a culturally acceptable time frame for introductions and getting acquainted.
- State very clearly the purpose of your visit.

- Remember that you are there to learn and not to preach or teach.
- Avoid criticism or displays of dismay, annoyance and disapproval.
- Avoid similar signs of approval.

Conducting the guided interview of the family

The guided interview is usually conducted in the home compound. Specific topics such as hygiene around food preparation and cooking are best discussed in the kitchen area so that the actual utensils and methods used to process and serve the food can be observed. It also facilitates the conversation and enables the interviewer to compare reported practices with observed behavior.

Remember to use probes (secondary questions) as a way to get more specific information after the initial response to a question, or repeat the respondent's last phrase.

Example of dialogue using probe

Question:	What food do you give your child in addition to breast milk?
Answer:	Many foods
Probe question:	What are they?
Answer:	The usual foods, like rice and vegetables
Probe Question:	Vegetables?
Answer:	Yes, you know, like mustard greens or spinach

Avoid going through the entire interview all at once. Rather, focus on each part at well spaced times during the 3 hour visit unless the caretakers are very busy. Encourage the caretaker or the mother to go on with the business at hand and continue the conversation while they work. It will make your interview more natural and congenial.

Guidelines for guided interview

- Make sure you ask all the questions to every family you visit.
- Involve caretakers other than the mother in the interview.
- When the answer to a specific question is vague, seek clarification by rephrasing the question.
- When you are not sure you have understood the interviewee's statement, summarize by saying, "Let me repeat. If I understand correctly..." Or request confirmation: "Do I hear you say..."
- Use "situational questioning" to elicit more accuracy in the responses to your questions. Example: ask about feeding practices while the mother is feeding the child; ask about the food the child eats when the caretaker is cooking or processing food or while talking in the cooking area.
- Avoid leading questions and practice active listening.

■ **STEP 3: SELECTING AND DOCUMENTING KEY SUCCESSFUL PRACTICES FROM PDI FINDINGS**

This is a critical step for planning the Hearth Nutrition Program. The information gathered on exist-

ing **successful feeding, caring and health-seeking practices** in the community will be used as the **basis for the nutrition program**, enabling the families of malnourished children to sustainably rehabilitate them.

A. Recording the information on each PD and NPD family:

After the visits to families have been completed, each team meets to compile information gathered from the interview and observation of each family.

Have each team create a matrix with 4 columns on paper and fill in the specific information they gathered from their notes on observations and questionnaire worksheets.

Model Matrix to Compile Information on Each Family Visited

Family # 1 Information	Feeding Practices	Care Practices	Health Seeking Practices
<ul style="list-style-type: none"> • Name of child • Age of child • Nutritional status • Birth order of child • Breast-feeding status • Caretakers' period names • Family occupation • Description of household garden, animals, cooking & eating place 	<ul style="list-style-type: none"> • Breast-feeding schedule • Special good food • Frequency of feeding • Quantity • Complementary foods • Content of last meal • Snack foods • Feeding behavior • Other observations 	<ul style="list-style-type: none"> • Active feeding • Food hygiene • Body hygiene • Feeding hygiene • Child supervision & care • Family members' relationship with child • Caring behaviors • Others 	<ul style="list-style-type: none"> • # diarrhea* episode in the last 15 days • Home treatment of child with diarrhea • Feeding the sick child & providing extra food & fluids during recovery • Breast-feeding during child's illness • Identification of signs of sickness • Seeking help for treatment of sick child • Vaccinations • Others

* Diarrhea: 3 or more loose stools in a day

B. Consolidating individual teams' PDI findings:

Prepare two summary flip-charts with 4 columns: one for all PD families, the other for the NPD families (or negative deviant families if they are included in the PDI).

Ask each team to present the findings on their home visits on the summary flip chart. Use one summary flip chart for all PD families' profiles. Encourage the reporter to make a lively account of each family visited, in a story telling fashion, with detailed observations. (See example from Vietnam below.)

Summary table of PDI findings in 3 PD families from Cau Loc commune, Hau Loc district, Than Hoa province, Vietnam.

Household	Good Foods Good Feeding	Good Child Care	Good Health Care
<ul style="list-style-type: none"> • Linh, M, 24 months • 3rd child • Mother is dead • Channel A 	<ul style="list-style-type: none"> • 4 meals a day • shrimps, fish or crabs, vegetables and fruits • Cook food in rendered pig's fat 	<ul style="list-style-type: none"> • Father and grand mother look after the child, teach him to talk, walk and play 	<ul style="list-style-type: none"> • Complete vaccination • Deworming once a year • The child is taken to health post timely when sick
<ul style="list-style-type: none"> • Hien, F, 8 months, • 4th child • Channel A 	<ul style="list-style-type: none"> • Breast milk • Shrimps or fish and sauropus (green vegetables) • 3 meals a day 	<ul style="list-style-type: none"> • Mother is main caretaker • Child is clean • Mother wash hands before eating 	<ul style="list-style-type: none"> • Deworming every 8 months
<ul style="list-style-type: none"> • Quyen, M, 6 months • 4th child, • Channel A 	<ul style="list-style-type: none"> • Breast milk main food • Exclusive Breast-feeding for 5 months • Complementary food now (broth with pig's bone) 	<ul style="list-style-type: none"> • First 3 months mother only caretaker, now grandmother and older sister • Love and care by all members of family 	<ul style="list-style-type: none"> • Vaccination on track • Use of traditional medicine for small illnesses

C. Selecting key practices from PD families

Identify and circle in the second column, "feeding practices," the foods which PD families feed their children, i.e., **foods which are not normally fed** to young children in this community, also called PD food or "**good food.**"

Identify and circle in the third column, "caring practices" that are practiced by PD families and accessible to all.

Repeat the same in the fourth column for good health seeking practices.

Criteria for selecting key good practices

- Accessible to all caretakers of the community today
- Unique or different from the norm; not part of the conventional wisdom
- Replicable

Note: Some successful practices may be "True But Useless" (TBU) because they cannot be acted upon today by all members of the community. Example: use of medicine to treat the sick child because an uncle works at the district hospital and has access to free medicines.

Identify and acknowledge the poor practices or lack of good practices among the NPD families that contribute to their child's malnutrition.

D. Summarize composite PDI findings

Make a composite matrix compiling results from all PD family visits. (See example from Mozambique and Nepal, below.)

Ask participants to name the "good foods," "good feeding," "good child care", and "good health care" practices available in the village.

Compare with the harmful practices (or lack of good practices) among NPD families (or the Negative Deviant families if included in inquiry).

After the participants have had the opportunity to share their findings on the composite matrix, invite the Nutrition Resource Panel to share its matrix prepared after the community assessment. If their findings confirm those listed, the positive deviance inquiry is likely valid. If there are major discrepancies, you will want to probe further holding discussions with the volunteers, participants and the panel until there is a consensus. Adjust the composite matrix accordingly.

Write one or two case studies on Positive Deviant family home visits to document your findings. (See case study narrative, Appendix I). More importantly these stories can be used as "narrative" in the community, since many cultures place great importance on oral histories, value and remember them.

Potential PDI Pitfalls and Solutions:

All PDI are not necessarily successful, as noted in the following scenarios:

1. No PD families can be identified in the neighborhood because of the small number of children in the target group. It may be difficult to find PD families in neighborhoods with less than 50 children in the target group. If the community context is similar to a nearby neighborhood where the PDI has been conducted successfully, the PDI findings can be "borrowed" from that community, provided that the community knows where findings came from.
2. No PD behavior can be identified in the selected PD family. Occasionally some PD children may be thriving in families whose feeding, caring and healthseeking practices are not different or more successful, or may be even worse than their NPD counterparts. This child may simply be unusually aggressive and have the drive and coping skills to get food, no matter what. "True, but useless!"
3. During the PDI, the NPD child is found to be malnourished because he or she suffers from chronic diarrhea or repeated infections or secondary illnesses like malaria. If after close examination of the case during the review session, it is concluded that the child's malnutrition is not due to any harmful household practices or due to lack of good practices, this case should be an opportunity to stress the role of repeated infections in malnutrition and the necessity to develop appropriate strategies to deal with this problem.

Through the interview on health-seeking behaviors, you may discover, however, that the family treated the child with repeated self-prescribed medication or, on the contrary, did not recognize illness or take early action. While reflecting on NPD families, this lack of good household behavior needs to be highlighted as potential contributing factors to malnutrition, that is, unnecessarily severe, prolonged or mis-treated illness.

Conducting the Positive Deviance Inquiry

4. The PDI is inconclusive because of the PDI team's inability to discover the PD behaviors through observation/interview or analysis. In this case, the PDI should be repeated after the cause of failure has been identified and appropriate measures taken. For example, retraining the PDI team on communication skills, especially probing, or rescheduling the PDI to enable the PDI team to observe the family during a meal, or during meal preparation.
5. The PDI fails to identify PD foods (special foods or foods that are not usually fed to young children). In some cultural contexts it may not be the food that constitutes the Positive Deviant behavior because every family has access to nutritious foods. The PDI, however, may reveal a striking difference between PD and NPD families in the caring and healthseeking behaviors (as evidenced in the SC/US nutrition program in Egypt where no PD foods were found but where active feeding and good hygiene seemed to be the defining PD behavior).

Positive Deviance Inquiry Results Mozambique (November 1997)

Successful practices identified through home visits to Positive Deviant families

Good Feeding Practices	Good Caring Practices	Good Health Seeking Practices
<ul style="list-style-type: none"> • Porridge made of cashew, fruit, molasses & manioc flour • Use of cashew nuts or peanuts in "Mathapa" (local dish) • Seafood • 4 kinds of leafy vegetables • 3 meals a day • Introduction of complementary feeding at 5 months 	<ul style="list-style-type: none"> • Covered drinking water container • Wash food before processing • Washing hands before eating • Supervision of young children at all times • Supervision or assistance of young child at meals 	<ul style="list-style-type: none"> • Complete vaccination • Purchase of medicine with prescription only • Appropriate usage of ORS package or homemade equivalent for diarrhea

Poor or harmful practices identified through home visits to Non-Positive Deviant families

Poor Feeding Practices	Poor Caring Practices	Poor Health Seeking Practices
<ul style="list-style-type: none"> • Only 2 meals a day • No cashew nuts or peanuts in food • No vegetable in daily diet 	<ul style="list-style-type: none"> • No principal caretaker • Water container not covered • Child not clean & no food hygiene 	<ul style="list-style-type: none"> • No vaccination

Positive Deviance Inquiry Results Nepal

Successful practices identified through home visits to poor families with well nourished children

Good Feeding Practices	Good Caring Practices	Good Health Seeking Practices
<ul style="list-style-type: none"> • Breast-feeding up to 30 months • Introduction of complementary feeding between 4 to 6 months • Feeding the child 4 to 5 times a day • Feeding the child many kinds of food, including wild food (berries, snails, frogs) • Feeding the child an early morning snack 	<ul style="list-style-type: none"> • Mother feeds the child herself • Use of different strategies to encourage eating when the child refuses to eat • Mother gives advice to secondary caretaker • Good body hygiene (regular baths, cutting nails & combing hair) • Hand washing before eating • Water tap is clean & drinking water covered • Daily massage with mustard oil • Father helps in care of children 	<ul style="list-style-type: none"> • Child fully immunized • Cool bath when child has a fever • Deworming • Seeking treatment of the sick child at health post • Giving Jeevan Jal (ORS) when child gets diarrhea • Treatment of colds & coughs with turmeric & ginger tea

Poor or harmful practices identified through home visits to Negative Deviant Families (wealthy * families with malnourished children)

Poor Feeding Practices	Poor Caring Practices	Poor Health Seeking Practices
<ul style="list-style-type: none"> • No complementary feeding of child over 6 months despite availability of food in the home • No vegetables in the diet • Only rice and salt for complementary feeding for child up to 15 months old 	<ul style="list-style-type: none"> • Lack of interest in the child displayed by adult caretakers • Lack of body & environmental hygiene • Mother needs mother-in-law's permission to feed the child new foods 	<ul style="list-style-type: none"> • No special diet for sick child • Mothers don't know about Jeevan Jal (ORS) preparation • Use of cow dung for the treatment of pneumonia • Mother needs permission from her parents-in-law to take child to health post for vaccination • Seeking treatment only from traditional healers

* According to community standards

■ **STEP 4: PROVIDE INFORMATION ON PDI FINDINGS TO THE COMMUNITY**

Have team members make a poster to illustrate the successful practices that enable even a very poor family to have a well-nourished child.

Discuss ways for the Village Health Committee to spread the information to the community at large, such as informing villagers at community meetings, displaying posters at the market place, school, health center, community center, village meeting house.

Create a sample chart based on the PDI findings regarding food (PD food) with the Village Health Committee. To illustrate the **variety** of food necessary to ensure adequate growth in the young child, develop a poster on a flip chart or draw on the ground 4 squares (the 4 food groups) and draw in the food that PD families feed their children or place in the squares the actual foods that constitute an adequate meal. If cultural context permits, invite Positive Deviant mothers to participate in this activity.

Explain the value of each category of food in relation to child's growth, **in addition to mother's milk.**

Example from Nepal (mountainous region) Note: PD foods in bold print

Pulse or rice, maize, millet, potatoes,	Snails, frog , goat, chicken, pork, crabs, fish
Vegetables: different kinds of spinach, green beans, onion leaves, eggplants, peas, pumpkin, onions, ginger and garlic Fruits: wild berries , banana, lemon, mullberries , orange, guava, mango	Ghee, oil Peanuts

Explore with the Village Health Committee the availability of food throughout the year by making a seasonal food calendar using PRA techniques. This activity can also be carried out when creating a NERS menu. (See next Chapter on creating NERS menus.)

PART VI: - DESIGNING A HEARTH NUTRITION PROGRAM BASED ON PDI FINDINGS

Once the Positive Deviant families' successful practices have been identified, the next step is to use them to develop your Hearth Nutrition Program, which will enable the families of malnourished children as well as other community members to ACCESS and ACT upon this new knowledge.

Nutrition Education And Rehabilitation Session (NERS)

The design of the Nutrition Education and Rehabilitation Session (NERS) component of the Hearth Program is based on the PDI findings. The NERS provides a skill-oriented learning environment where caretakers learn to rehabilitate their malnourished children under the supervision and the support of trained volunteers.

NERS Participants

To choose what category of malnourished children will participate in the NERS depends on the overall number of identified malnourished children in the community. For instance in both the Nepal and Vietnam Hearth Programs, the large number of second and third degree malnourished children dictated that only these children were targeted for rehabilitation. Other Hearth Programs targeted all malnourished children in the community (i.e., Bhutan, Egypt and Mozambique).

Identifying "NERS Centers" With The Help Of Health Volunteers

Criteria for selection of the NERS center or neighborhood kitchen:

- **Must** be easily accessible for the participants
- **Must** have enough space to accommodate a group of 8 to 15 children and their caretakers
- **Must** have a source of clean water and a latrine
- **Must** have adequate kitchen space for 3 or more women to process food and cook a meal for 8 to 15 children

Note: The NERS center is often the home of the Health Volunteer

Setting A Nutrition Education and Rehabilitation Session Schedule

To help your community partners decide on the NERS schedule, consider with them the daily availability of the Health Volunteers. Also remind your community partners that the NERS is time-limited in its implementation, i.e., it is usually carried out over a 6 to 10 month period depending on the rehabilitation rate and number of participants.

Characteristics of NERS:

The NERS are usually carried out on a monthly basis. NERS are also scheduled to follow soon after the monthly or every other month GMP session at which time newly malnourished children have been identified to participate in the next NERS. The timing also allows the assessment of the current nutritional status of NERS participants, determining their eligibility to participate in another NERS.

The NERS run for a sufficient number of consecutive days every month to initiate the child's reha-

Designing a Hearth Nutrition Program Based on PDI Findings

bilitation and to allow the caretaker to be comfortable practicing the new skills in a supportive environment. Most Hearth Programs run the NERS for approximately 12 days per month.

As critical as the participation in the 12-day NERS, is the post-NERS period during which caretakers practice the newly acquired skills at home on their own.

Example: NERS Schedule, Vietnam (12 days a month)

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
NERS*	NERS	NERS	NERS	NERS	NERS	Off
NERS	NERS	NERS	NERS	NERS	NERS*	**
**	**	**	**	**	**	**
**	**	**	**	**	**	**
**	**	**				

* Participating child is weighed

** Rehabilitation of child by caretaker at home on their own

Deciding on the NERS Daily Sessions Schedule

On average the daily NERS class lasts about 2 hours from preparation to clean up after the meal. Caretakers of participating children usually can't out kitchen duties on a rotating basis. The supplemental feeding activity itself takes about 1/2 an hour. The daily NERS meal is an **EXTRA meal** and should be scheduled halfway between other planned daily meals.

Creating NERS Menus Incorporating The PD Foods

NERS menus are based on findings from the PDI and use meals which the positive deviant families cook and feed their well-nourished children. However, because the participating children in the NERS are **malnourished**, total calorie and protein intake must exceed the daily normal requirement. Thus each child's portion should be from 600 to 800 calories and contain 20 to 30 grams of protein.

Besides speeding up the child's recovery, this extra meal also enables the mother or other caretaker to observe visible changes in the child within the first 2 weeks of rehabilitation. Encouraged by these positive results, the mother is more likely to continue the rehabilitation of her child at home on her own, increasing the frequency of feeding and the amount and variety of food she uses in her meals.

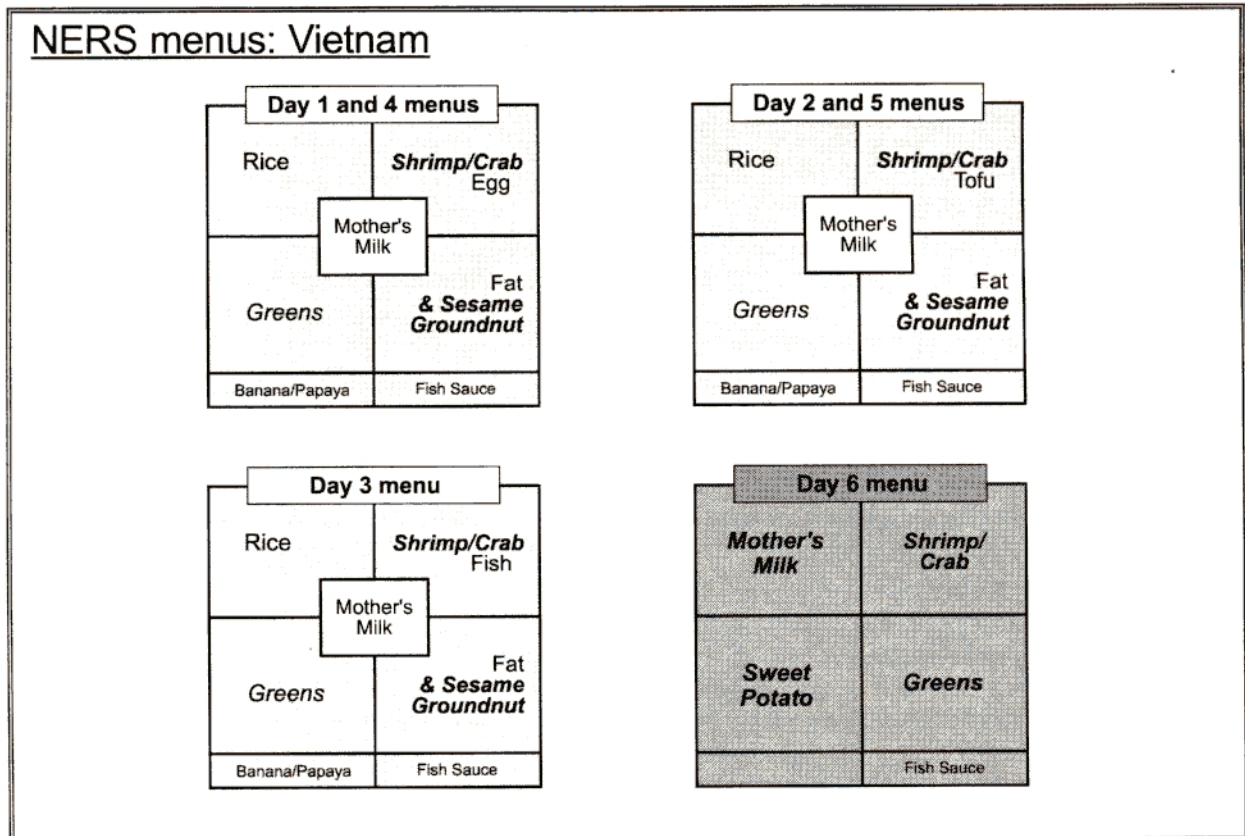
In most Hearth Programs participating families contribute the PD foods and some fuel and the initiating NGO partner provides whatever else is required. In some programs, however, participants contribute all the ingredients to the NERS meal (Mozambique, Tanzania). In these cases the participants must be told how much of each ingredient to bring in order to ensure that each child's portion has enough nutritional value.

Designing a Hearth Nutrition Program Based on PDI Findings

Criteria for making NERS menus

- Design 3 or more menus to be repeated at least twice within each monthly NERS.
- Each menu should provide between 600 to 800 Kcal per child serving.
- Include special foods identified through the PDI and contributed every day by the caretakers of the malnourished child.
- Use locally available food.
- Use affordable food.
- Use food rich in vitamin A and other micronutrients (fruits and vegetables).
- Use animal products and fat whenever available and affordable.

In Vietnam, the National Institute of Nutrition endorses the use of food squares to illustrate food varieties and groups. Each big square represents a menu with its ingredients. In the example, PD foods are in *italicized bold*; the Day 6 menu completely relies on PD foods.



Developing NERS Education Components

Although behavior change is promoted through learning by doing, other strategies can be used to reinforce the concepts behind the new practices.

Choose the educational medium which suits best your cultural context and the concept at hand. For example, in communist Vietnam, verbal and written messages work best given the political culture and high literacy rates. In Nepal, visual games and songs are most effective. In Islamic

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Egypt, quotes from the Koran work best.

Each day of the NERS a new health related topic is introduced through situational discussions and illustrated by an educational medium such as a song, an appropriate game or a message. (See Appendix J). Topics covered include, but are not limited to: breast-feeding, variety and frequency of feeding, complementary feeding, child caring practices, health-seeking practices **and** the ability of participants to keep their children healthy at home on their own by following existing successful practices (PD behaviors).

If you choose messages, ensure that they are short, simple and clear, motivating and achievable. (A good reference for messages is the UNICEF booklet, "Facts for Life".)

Messages should highlight, illustrate or summarize what caretakers have been learning by doing.

Examples of NERS topics from SC/Japan:

- Day 1:** Breast-feeding
- Day 2:** Good foods for our children
- Day 3:** Supplementary food
- Day 4:** Good childcare
- Day 5:** Good health care
- Day 6:** Care of child at home (PD behavior)
- Day 7:** Safe Motherhood

The following is a more detailed description of NERS topics used by Africare in Tanzania:

1. Exclusive breastfeeding for 4 - 6 months
2. Increased use of PD foods: groundnuts, beans, milk (for non-breastfed children), and fruits and vegetables
3. Increase number of meals and snacks per day
4. Improved household feeding and body hygiene
5. Management of diarrheal disease with ORS, continued feeding foods and fluids and supplemental feeding after illness
6. Importance of child spacing
7. Prompt care-seeking in the case of illness (malaria, diarrhea)
8. Use of impregnated mosquito net
9. Importance of active feeding and close supervision

Example of NERS messages from Vietnam:

Day 1 Message: Breast-feeding

"Breast milk is the best food for the child. It helps protect the child against disease and fosters a strong relationship between mother and baby. Keep breast-feeding until 24 months".

Day 2 Message: Variety of Food

"We must give children under three a variety of foods three to five times a day. These foods include the "Good Foods" which some very poor families feed their well-nourished child and which are available in our commune. We can make a "colored bowl" of these nutritious "Good Foods" which are..."

Day 3 Message: Complementary Foods

"From four to six months, in addition to breast milk, we need to give children additional food. We can start by giving them soft rice gruel and gradually give them a thicker mix of rice flour cooked in shrimp, crab, fish or vegetable broth."

Day 4 Message: "Good Child Care"

"Children need people to take care of them, feed them, play with them and guide them. Good child care will help the child grow healthy, bright and able to love people."

Day 5 Message: "Good Health Care"

"We can prevent diseases from affecting children by:

Keeping the house, the children's bodies, and their food clean

Taking children for immunization to prevent serious diseases

Timely bringing of sick children to the health center for treatment

Weighing young children regularly to detect malnourishment at an early stage."

Day 6 Message: Taking care of the child at home

"Families can continue to maintain and improve their children's health at home by using:

The "Good Foods" available in the commune which are...

The "Good Child Care" and "Good Health Care" they have learned from the Model Families (PD families) such as..." (The facilitator uses the Model Family poster which was created after the PDI in that community)

*A "colored bowl" represents a healthier, more varied, more colorful meal (with greens, egg, bits of fish, beans) than the typical, less nutritious, monotonous meal (white rice).

Developing Strategies To Promote Behavior Change

To meet the second goal of the program, i.e., to enable the caretakers of the malnourished child to **maintain** their enhanced nutritional status **at home**, integrate lessons learned from the PDI in your Hearth Program to promote **behavior change** in both the caretakers and the community at large in the following ways.

1- At the household level

Require the daily contribution of the PD foods by caretakers as "price of admission" to the NERS. This mandatory daily food contribution is **critical** for the sustained rehabilitation of the malnourished child because it enables the caretaker to **change habits** by adding a new, demonstrably successful food to the child's diet. It is, therefore, necessary to include the purpose of this special daily food contribution in the daily NERS protocol.

The importance of the daily contribution can not be over-emphasized. It is this feature of the NERS which, likely accounts for its success and separates it from many traditional programs where participants are "taught" how to feed their children. **The daily contribution focuses on "changing behavior" rather than "transferring knowledge."** Of course, once the participants have witnessed the impact of their new behavior on the enhanced nutritional status of their children, they do internalize and "own" the new knowledge. However, the NERS reverses the traditional learning paradigm from "knowledge leads to behavior change" to "behavior change leads to knowledge."

Designing a Hearth Nutrition Program Based on PDI Findings

If caretakers "forget" to bring their contribution they are allowed to participate that day, but if they fail to bring their contribution the next day, they are not be allowed to participate that day. If the situation does not improve, the VHC or traditional community mediators may be asked to help solve the problem. In some Hearth Programs all the food is contributed by participants; thus, when a caretaker forgets to bring her food contribution, the repercussions for the group are far reaching.

Example of daily protocol in NERS for health Volunteers (Vietnam):

- Preparation of NERS center to welcome caretakers and their malnourished children
- Collection of the PD food contribution from each caretaker
- Processing the food and cooking the meal with assistance of 2 or 3 caretakers
- Cleaning hands and faces of children before the meal
- Review the NERS objectives and discuss today's message with caretakers (while the food is cooking: 20 to 30 minutes)
- Supervision of caretakers while feeding the children
- Supervision of cleaning up (washing children's faces and hands, cooking utensils and bowls, mats)
- **Reminding caretakers to bring their PD food contribution to the NERS the next day and explaining why this contribution is so important**

Examples of PD food contribution (Vietnam, Nepal):

Vietnam:

- Lowland areas: fresh or dried river or paddy shrimp, or crabs and greens
- Seaside areas: fresh or dried sea fish or shrimps and greens
- Mountainous areas: groundnuts and greens

Nepal:

- Mountainous areas: vegetables, wild fruits, crab or fish
- Lowland areas: crabs, grains, pulses

Require the active participation of caretakers in all aspects of the NERS such as food processing, cooking, and clean up.

Include successful feeding, caring and health-seeking practices identified during the PDI in the NERS protocols such as:

- Washing hands before processing food, before and after eating
- Supervising the child during the meal
- Encouraging the child with poor appetite
- Demonstrating the use of the ORS package for oral rehydration
- Identification of danger signs for Diarrhea and ARI or other non-specific danger signs

Seek the commitment of the participating families to **continue at home** to feed the child the meals they have learned to prepare and use during the NERS.

In cases where the caretaker of the child is an older sibling, the Health Volunteer pays home visits to the family to ensure that the goals of the program are well understood by the parents and/or other decision makers in the household.

Involve key family members other than the mother (fathers, mother-in-law) in the rehabilitation process through home visits. Health Volunteers pay home visits (monthly or every other month)

to the families of NERS participants to ensure that all the caretakers are actually continuing the child's rehabilitation at home.

Other strategies to support behavior change in the NERS include:

- Selection of mothers with healthy children as volunteers (Bangladesh)
- A special menu on the **last day** of the NERS which consists of **only** the PD food, (i.e., food any family in the community can afford), plus the main starch ingredient in the local diet and some fat (Vietnam)

2- At the community level

Develop with villagers simple, multi-channel, multi-targeted messages based on the successful nutritional habits of Positive Deviant families. In Vietnam, in some villages NERP messages have been adapted for use in the school curriculum on health and hygiene. Other communities have used the public address system to propagate NERS messages at health events such as EPI and GMP sessions.

Involve decision makers and opinion leaders in the program (i.e., religious leaders, teachers, traditional healers, drug vendors) and rally their support for initiatives to promote good feeding, caring and health seeking practices among their constituencies.

Promote dissemination of information on good nutritional practices at community events.

Integrate NERS concepts and messages into other community-based activities or projects such as parenting programs (Redd Bama Nepal and SC/Japan) and Safe Motherhood (SC/US in Vietnam, SC/Japan and Redd Barna in Nepal), agriculture (kitchen gardens), animal husbandry and forestry programs (Bhutan).

Examples of other community-level activities and initiatives, **Vietnam:**

- A Nutrition Day including a competition for the Best Health Volunteer
- Participation of community men at introductory session of all HV trainings
- A "commercial" shop set up by a village family, selling low cost (5-10 US cents) meals to community members
- Children's puppet show about "Good food, good care and good health" at community-wide meeting
- Posters featuring food squares and PD food placed throughout the community at meeting hall, clinic, and school

PART VII: - OTHER HEARTH NUTRITION PROGRAM COMPONENTS

I. GROWTH MONITORING AND PROMOTION

Purpose Of The GMP Program

- To enable families to know the current nutritional status of their child and monitor his/her growth over time.
- To identify "at risk" malnourished children for enrollment in the NERS.
- To enable the community to monitor the aggregated nutritional status of all target group children in the community over time.

Description of the GMP program

The GMP program involves the regular weighing of young children to ensure that they are growing normally. A GMP program may already be in place in the communities where you plan to have a Hearth Program. It may be implemented by the district health mobile team as a joint EPI/GMP activity or by local health providers. In general, GMP programs are difficult to implement and are plagued with problems such as poor coverage and poor accuracy in plotting the weight on the growth chart. Often caretakers are unwilling to make the effort to bring their children to the GMP if no real benefit is perceived, for example, if a caretaker is told that her child is malnourished but not given counseling or follow-up plan.

In the context of the Hearth Program, the GMP program is a community-wide activity, which involves community mobilization and participation and **provides follow-up**. Health Volunteers and other community members join the local health providers (if available) or carry out the activity by themselves in a decentralized fashion, at neighborhood level. These trained individuals weigh the children, assess their current nutritional status and provide immediate feedback to their caretakers. Beside praising and encouraging the caretakers whose children are growing normally, the HV counsels caretakers of children whose growth is faltering and identifies malnourished children for immediate enrollment in the next Nutrition Education and Rehabilitation Session (NERS). Children who are sick are referred to the local health post or the district hospital for treatment.

The Hearth Program provides an opportunity to collaborate with the District Health Department by training or retraining health staff and allowing local community members to learn the skills to carry out the GMP in more remote areas, hence increasing the GMP program coverage and usefulness.

The GMP Schedule

The GMP program is carried out monthly or every other month and requires the weighing of ALL children in the target group. It is a key approach to identify malnourished children and secure their enrollment in the NERS. If the GMP program is not currently available in the community:

Ascertain the community capacity to mobilize parents of young children for the GMP.

Consider other scheduled health activities in the community, such as EPI, to see if GMP can be integrated with those interventions thus maximizing overall impact.

Steps To Plan The First GMP Session

Ensure that you have enough scales (100 gram calibration) and a good supply of child growth

charts, Health Volunteers, and a GMP Roster Book.

Develop the curriculum for the first GMP Training Session.

Set up a meeting with the VHC to plan the first GMP (who?, what?, where?, when?)

Update the roster of children in the target group from the baseline survey, including children born after that date and any deaths which may have occurred.

Identify the people to be involved (local health providers, teachers, Health Volunteers). It takes a minimum of 5 people to carry out a GMP session at each site: the local chief or leader, the Health Volunteer, one or two trained staff (local health providers or partner NGO staff) and a community male volunteer. The trained staff can rotate between different GMP sites over a two-day period, enabling them to cover all sites.

Schedule and carry out the GMP training with identified individuals.

Decide on the number and location of GMP weighing sites, each with 3 stations: welcoming area, weighing area and plotting/counseling area. If possible, weighing should be carried out at a local neighborhood site where approximately 60-100 children could be weighed. A population of 5,000 people with 400 children less than 36 months would ideally require a minimum of four GMP sites.

Mobilize the community through your community partners.

Agenda for meeting on planning the first GMP with the community

- Review the overall goals of the Hearth Program and what has been done to date
- Purpose of the GMP component of the program
- Description of the GMP program
- Inventory of manpower necessary to implement the program
- Selection of a GMP coordinator and implementers (HVs and others) at the village level
- Schedule and logistics for first GMP training

GMP trainings

Because of the importance of this activity throughout the life of the program, GMP implementers need to learn and maintain the basic skills needed to implement the program successfully (plotting the weight of the child, interpreting the growth curve, counseling the caretaker, consolidating and reporting results). Hence it is necessary to carry out at least 3 GMP trainings over the first year of implementation with an additional refresher training in the second year. Not only local health providers and health volunteers, but also chiefs, leaders and others can learn to weigh and plot.

GMP Session Results

The monthly or every other month GMP session results are consolidated during a Village Health Committee meeting to assess the current nutritional situation of all children in target group.

Note: In some settings prone to gender biases, implementers are encouraged to compile GMP session results also by gender at least twice a year.

Example from Mozambique:

Cabo (village) GMP Session (every other month)

Date of weighing: _____

Name of Cabo: _____

Name HV	Chefe de Zone	Children < 3 #	Children Weighed #	Normal		1st Degree		2nd Degree		3rd Degree		Total 2nd 3rd		D*	M*
				#	%	#	%	#	%	#	%	#	%		
Total															

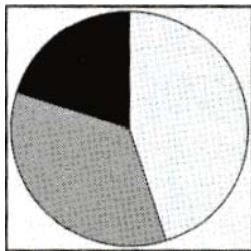
* D = died, M = moved out

GMP "Score Boards"

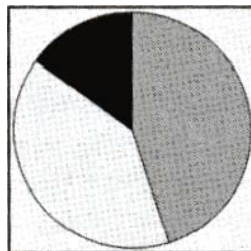
Create GMP "score boards" to enable the community to visualize the progress of the program over time. The type of display will vary by culture and context.

Example from Vietnam

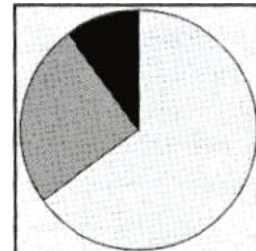
GMP 1, (11/93)



GMP 5, (7/94)



GMP 13, (11/95)



Example from Mozambique

In the SC/US Hearth Program in Nacala-a Velha, community score boards consist of wooden sticks all of the same length. After each GMP, the proportion of well-nourished to malnourished children is painted on the stick. Red zone for malnourished children and green zone for well-nourished children. The sticks are kept at the Cabo's house (village chief).

II. VITAL EVENTS

Another component of the Hearth Program is the monitoring of vital events by the community. The purpose of monitoring vital events is to enable villagers to have a greater awareness of what is happening in their community and to better understand the causes of maternal and child mortality in order to initiate activities to reduce their incidence in the the future. Some Hearth Programs include a Safe Motherhood initiative in their second phase; others integrate a Hearth Program with their current Safe Motherhood program.

Health Volunteers with the help of TBAs and local health providers (if any) monitor vital events

and update their family registration book accordingly. Vital events include births, deaths, particularly infants and children under 5 years of age, maternal deaths, and in- and out-migration. They report on vital events in their neighborhood to the VHC on a regular basis. In addition to reporting the counts, volunteers tell the story behind deaths, providing valuable information on the circumstances and often shedding light on causes which galvanizes the community to action.

III. COMMUNITY MANAGEMENT

Using the UNICEF "Triple A" approach: Assessment, Analysis and Action, the Village Health Committee carries out the following tasks:

1. Assessment of health events in the community

Through periodic meetings, the Village Health Committee reviews and assesses the following:

- Vital events (births, deaths, migrations)
- The current nutritional status of **all children** in the target group (based on the results of the last GMP weighing)
- The current nutritional status of **children participating in the NERS** and number of malnourished children who will participate in the next session (based on the results of the last NERS and number of newly identified malnourished children from last GMP)

Individual Health Volunteers present the results of the latest NERS in their neighborhoods. The results are aggregated to get a community-wide assessment of the progress of the NERS.

Example from Vietnam:

Results of a monthly NERS activity:

Name of HV	Hamlet	Total Children #	Gained Weight		No Gain		Lost Weight		Children Graduated		Absences (deaths, illnesses)
			#	%	#	%	#	%	#	%	
Total											

2. Analysis and Action

Analysis of current NERS implementation

VHC members create a check list to monitor the status of program implementation. They discuss problems such as the need for temporary HV replacements (funerals, wedding, sickness), poor HV performance, and issues impacting the quality of NERS. They then identify solutions and actions required to address the problems. These usually involve improvements in program delivery and provision of additional training.

Example: Analysis and Action NERS Check List (Vietnam)		
Items	Analysis/Problems	Solutions/Actions
Participation of caretakers		
Caretakers' PD food contribution		
Cooking tools, cooking		
NERS menus (seasonal adjustments)		
Buying food		
The NERS food		
The NERS messages		
Counseling caretakers		
Help from community members		
NERS schedule (seasonal adjustment)		
Health Volunteers problems		

IV MONITORING AND EVALUATION

Setting up impact objectives for the Hearth Nutrition Program

Although it is very difficult to predict the rate, speed and sustainability of nutritional enhancement of children in the community before the program even begins, it is useful to set quantitative objectives against which the community and partner NGO can later measure the efficacy of program implementation. These objectives may prove to be unrealistically high or low and may need to be adjusted accordingly, however, they do provide a goal towards which everyone can strive.

Example of objectives:

1. To achieve a 50 % reduction of malnutrition in the target group by the end of the first year implementation
2. To further decrease malnutrition by 30% in the second year of implementation
3. To rehabilitate 80% of malnourished children participating in the NERS by the end of the first year
4. To sustain the rehabilitation of 80% of the same children by the end of the second year
5. To reduce the gender gap in malnutrition by 50%

Tools:

Baseline nutritional survey

GMP session results after one and two years of implementation

Possible Impact Indicators:

1. # and % of malnourished children at baseline, after one year, after two years
2. # and % of children who participated in NERS and were rehabilitated
3. # and% of children in the target group who died in the first year
4. # and % of children in the target group who died in the second year

Other Hearth Nutrition Program Components

5. # and % of girl children who were malnourished at baseline
6. # and % of girl children who were malnourished after one year of implementation

One year after the NERS program has been discontinued:
 # and % of NERS participants who remained well-nourished
 # and % of NERS participants who have died

Over the life of the NERS (usually 6 to 10 months), the following indicators may apply:
 # and % of malnourished children who participate in the NERS
 # and % of NERS participants who "graduate" after one NERS, two NERS, three NERS
 # and % of NERS participants who relapse

Example from Vietnam:

Summary results of nutritional status of all children under 3 over 1 year

Name of commune: _____

Date Of GMP Sessions	Children < 3 #	Children Weighed #	Normal		1st D		2nd D		3rd D		Total 2nd 3rd		D*	M*
			#	%	#	%	#	%	#	%	#	%		
1 Baseline Date														
2 Date														
3 Date														
4 6 months Date														
5 Date														
6 Date														
7 1 year Date														

*D = dead, M = moved out

Note: It is extremely important to set and monitor **knowledge** and especially **behavioral objectives** intermediate to achieving impact.

Examples (Highlights of Qualitative Impact Assessment Appendix K)

1. Introduction of nutritious complementary foods in children 6-11 months of age
2. Exclusive breast feeding for about 4-6 months
3. Practice hand-washing before food handling
4. Caretaker knowledge of danger sign recognition in young children

Tools:

Focus group discussions at the beginning and end of the program can provide information regarding changes in feeding, caring and health seeking behaviors. Home visits to ascertain the use of new practices and random conversations with community members are also useful. Resources permitting, KPC surveys can assess reported behavior, yet questions of actual behavior practice may remain.

In addition to the 4 standard components of the Hearth Program described above, the following interventions are often jointly carried out as well:

V. DEWORMING

Deworming can be carried out at GMP sessions for all target children (over 6 months of age) once or twice a year following MOH recommended dosage for each age group (Vietnam) or caretakers can be encouraged to deworm their children during the NERS- (Redd Barna, SC/Japan).

Preparations for distribution at GMP sessions include:

- Purchase the deworming tablets. In Vietnam this distribution is subsidized by the partner agency during the first year of program implementation and subsequently by the local People's Committee.
- Instructions to the caretaker on how and when to give the child the single tablet deworming medicine
- Recording the deworming date on each child's growth chart

VI. VITAMIN A DISTRIBUTION

Vitamin A is a micro-nutrient that plays an important role in vision, cell differentiation, bone growth and especially in resistance to infection. Children between the ages of six months to 6 years are at greatest risk of Vitamin A deficiency. Because their nutritional demands are high, their consumption of Vitamin A-rich foods can be limited, and infections can deplete body reserves of this vitamin.

Deficiency also occurs when absorption and utilization of Vitamin A are compromised. Infections and/or low consumption of fat, oils or proteins often cause this. Foods containing fat or oil are needed by the body for proper absorption of Vitamin A and protein, for its proper utilization.

Impact Of Vitamin A Deficiency On Children's Health

A common sign of Vitamin A deficiency is night blindness. Even sub-clinical deficiency is associated with an increased risk of infection (diarrheal disease and severe respiratory infection) and even death. If you work in an area of high child mortality and high childhood malnutrition, if there is documented incidence of childhood blindness or "night blindness," or if the diet of young children is low in fat or oil content, Vitamin A capsule distribution may be an appropriate component of the nutrition program. It must, however, be consistent with the MOH policy. Vitamin A supplementation in areas of Vitamin A deficiency can reduce child mortality by 23% to 34%.

Logistics for Vitamin A Distribution

Secure MOH permission to distribute the Vitamin A.

Locate where Vitamin A capsules are available (usually at the district or provincial health department).

Assess the quantity you need for distribution according to MOH policy.

Plan to distribute the Vitamin A capsules at GMP sessions.

Instruct health providers or HVs to follow MOH guidelines for Vitamin A dosage for each age group.

Remind the HVs to record the distribution of Vitamin A capsule on **each child's growth chart**.

VII. MATERNAL AND CHILD HEALTH

This component of the program is critical for the prevention of malnutrition in young children, especially "newborn malnutrition" or low birth weight. Because maternal health care plays an essential role in the well-being of the fetus, newborn and infant, many Hearth Nutrition Programs include a Safe Motherhood initiative or a Maternal and Child Health component.

This program is predicated on the fact that healthy women have healthy babies. Activities may include: improved antenatal care, delivery and post-delivery care at home or at health facilities; home-based counseling in maternal diet during pregnancy and after delivery; delivery preparedness (identification of danger signs, reducing workload); colostrum intake and exclusive breastfeeding promotion. Vitamin A distribution to post-partum mothers, as well as good health-seeking practices for the infant, including vaccination and participation in the GMP program.

The program objectives can include but are not limited to:

- Providing women with access to quality prenatal care
- Ensuring cleaner and safer delivery
- Promoting good health-seeking behaviors among pregnant women, postpartum mothers, their families and community regarding pregnancy, delivery and the post delivery period for the mother and infant.

Depending on the community capacity to cant' out the program and the availability of MCH services at the local level, a range of activities can be implemented which have direct and lasting impact on the nutritional status of both mother and child. The Maternal and Child Health component can be introduced from the very beginning of the NERS program as is done in Nepal or in the second phase as in Vietnam.

Example: Nepal/SC Japan: Safe Motherhood Program (NERS phase 1)

- Situation analysis including PDI
- Training TBAs in clean delivery
- Establishing antenatal clinic
- Promoting anti-tetanus vaccination
- Promoting iron supplementation for pregnant women
- Training Community Health Facilitators in pregnancy and antenatal care, nutrition during pregnancy, care during delivery and post-partum care
- Breast-feeding promotion
- Vitamin A distribution to post-partum mothers

Example: Vietnam/ SC/US: Healthy Mother Healthy Baby/MCH Program (NERS phase 2)

- Situation Analysis (evaluation, case studies and survey, done during NERS Phase1)
- Pregnancy Monitoring: minimum 3 prenatal check-ups with counseling, iron supplementation and anti-tetanus vaccination
- Home-based counseling by Health Volunteers through 4 visits to women and their families.
- Monthly review of MCH activities at the monthly Village Health Committee meeting including: vital events (i.e., miscarriages, abortions, stillborn, live births, perinatal and neonatal deaths, case studies of obstetric emergencies and outcomes).
- MIS for MCH activities: a monitoring system in place at both community and district level, including a reporting flow of the MCH data from the community to the district MCH Department and feedback to the community health post.
- MCH training at community level: (1) public health providers: prenatal care, maternal nutrition, delivery and post-partum care, monitoring and reporting (2) TBAs and private providers: danger signs, referral guidelines, clean delivery care and post-partum care.
- MCH training at district level: TOT in MCH, including pregnancy monitoring, sterilization of instruments, management and supervision skills, monitoring village level staff and reporting.

PART VIII: - COLLABORATION WITH DISTRICT HEALTH PERSONNEL

Role of District Health Services

Advantages

A strong endorsement, involvement and participation by the district health office in the Hearth Program can significantly enhance its overall impact and potential for "scaling up." As described elsewhere in the guide, linking and integrating hearth activities such as GMP with ongoing district activities at the village level can enhance villagers' participation and provide "value added" to both activities. Required referrals of village children to district health facilities are usually much smoother and more successful when district health personnel are already aware of and supportive of the Hearth Program.

If a Maternal and Child Health/MCH component is implemented as part of the Hearth Program, the district health services can play a vital role in training public health providers, TBAs and private providers in clean delivery and post partum care, recognition of obstetric "danger signs," referral guidelines, sterilization of instruments, and so on.

The district health office can in turn benefit from Health Volunteer data on children's nutritional status and vital events as it is almost always more accurate than that collected by outsiders or from facilities. Rosters used for the GMP can also assist EPI teams in reaching maximum coverage during village EPI campaigns. Village data from a closely monitored MCH Hearth component can make an invaluable contribution to district health personnel's understanding of "the reality" of maternal and child health conditions and outcomes at the village level.

The active participation of district health personnel during the **pilot phase** of a Hearth Program can be invaluable at a later stage when "**scaling-up**" to other communities in the district is desired. In Vietnam, for example, the district provided trainers for Health Volunteers in new program villages during the Hearth expansion period.

Disadvantages

There are, however, certain problems and potential pitfalls related to the participation of district health personnel. In reality, very few of the countries in which the Hearth Program has been implemented have district health personnel with either the skill, will or experience to work at the community level. With the exception in a few countries of mobile EPI teams, district level health personnel rarely if ever visit the village.

Another issue to consider is the inordinate power vested in "higher-ups" in many developing countries. District health personnel may often be extremely intimidating to local villagers and leaders. Their involvement in **early stages** of the Hearth Program implementation (i.e., PDI, creation of the NERS) can potentially jeopardize the adult learning approach of the model, by replacing the desired "bottom up self-discovery and experimentation" with top down commands and orders. Hence, it is important to decide **within your local context** at what point district health participation will be most useful and to strike a balance between the potential benefits and risks inherent in that involvement.

APPENDICES

Appendix A

Regional Profiles of Positive Deviance Feeding Practices: Supplementary Information (Zeitlin, MR 1996)

Asian Subcontinent -- Afghanistan to Nepal and Bangladesh: Cultural misunderstanding of the child's developmental readiness to eat adult foods. Child is perceived to be physically "ready to eat adult foods" at a later age than is justified by modern nutritional science, i.e., after the child can walk, after back teeth have erupted, after child can feed him/herself - or not until 18-24 months. Adult meals of rice, flat breads, spicy sauces with vegetables and animal food ingredients, may be given in small tastes or not at all before this age. Breastfeeding continues past two years. Widespread lack of soap and clean water, and poor hygiene may make long reliance on breastmilk and late feeding of perishable foods protective.

Positive deviant feeding profiles:

- Family foods and nutrient-dense animal and vegetable foods are given in adequate quantities before the age of 15 months
- Parents have a scientifically accurate understanding of the child's maturational time-table and nutritional needs and actually do what they say (not just lip service)
- Good food and personal hygiene
- Special foods given to the child:
 - Porridges/puddings made with cereal grain, sugar and milk, butter fat or other oil.
 - Soft rice cooked with dal or mung beans
 - Milk products: water mixed with yogurt (lassi)
 - Snacks and sweets: e.g. puffed rice, sweets prepared with milk, flour, sugar and oil,
 - Halvahs
 - Fruits in season, particularly mangos and citrus

East and Southeast Asia-Burma to Korea-also Malaysia, Indonesia, Philippines:

Starches and liquids of inadequate nutrient density are given too early, e.g. sweetened rice gruel, soft rice, clear or noodle soups, tea or soft drinks. This causes stunting and vitamin A and iron deficiency. Frequent sweet and starchy snacks may fill child with empty calories and cut appetite for meals. Unregulated sometimes toxic food additives.

Positive deviance profiles:

- Exclusive breastfeeding for six months followed by sustained breastfeeding
- Replacement of thin rice gruel by thick enriched gruel/soft rice and by soft adult foods before nine months
- An inexpensive food of animal origin or soya, fed in sufficient quantity to meet micronutrient needs
- Oil or fat in the diet
- Fruits or green or yellow vegetables for Vitamin A and other micronutrients
- Supervised balanced and scheduled meals

Sub-Saharan Africa:

Watery maize, sorghum or millet gruels may be started too early, be force-fed, and fill the child without providing adequate nutrients. Working mothers can't let the infants on their backs grow too heavy to carry. Meal time is a teaching event-more essential for educating the child than for her

nutrition. Food is communal property. The individual's share depends on seniority, social skills and ability to help oneself appropriately and unobtrusively. Children learn these rules by observation and example, particularly around the family bowl. Children below 5 may have no right to help themselves to nutritious foods from the common bowl (W. Senegal); or they may be given tiny portion sizes proportional to their low rank (W. Nigeria). Fathers permit favored 1- 3 year olds to join their private meals. Adults and children may eat only once or twice a day. Indulgence in frequent meals may be seen as character weakness.

Positive deviance profiles:

- Gruels for infants are enriched with soy, peanut paste, niebe, cowpeas, milk, egg etc.
- Former pastoral milk-drinkers keep milk products as part of child's diet
- Diet contains red palm oil and seasonal fruit
- Five or more meals or snacks per day:
 - Child receives regular adult supervised extra meals or snacks in addition to and apart from the main family meals, i.e., nutritious meal/snack in kitchen with mother during food preparation; fruit or biscuits brought by father or others; eats privately with father or with mother or both together; grandmother or auntie gives food treats.
 - Parents understand the relationship between good nutrition and success in school and that they need to discipline the child through verbal explanations rather than relying on food distribution and other object lessons alone for moral training.

The Middle East, Mediterranean, North Africa and the Gulf States:

Ample quantities of starchy foods with sufficient fat content are offered to infants and young children, but dietary diversity, foods of animal origin and fruits and vegetables tend to be lacking. Hygiene often is deficient.

Positive deviance profiles:

- Exclusive breastfeeding for six months followed by sustained breastfeeding
- Presence of animal foods, fruits and vegetables
- Clean drinking water
- Good household hygiene, regular deworming

Rural Areas of Latin America:

Monotonous diet of maize and beans, rice and beans, or potatoes is bulky, fibrous and insufficiently dense in micronutrients to promote good growth.

Positive deviance profile:

- Presence of animal foods, fruits and vegetables
- Frequent active feeding to compensate for low palatability

Urban areas of Latin America, the Caribbean, South Pacific, and Urban Poverty Zones of

Other Poor and Rich Countries: Diet heavy in cheap fatty processed convenience or "junk" foods, fried crisps, sweets, soft drinks; low grade foods imported to the area, with few fresh or local foods.

Positive deviance profiles:

- Exclusive breastfeeding for six months (if culturally possible) followed by sustained breastfeeding

- Home cooking, organized meal times and supervised meals
- Home or community gardens
- Concepts of home economics- planned shopping and food stocks
- Knowledge of "good foods" and ability to make wise food choices
- Fruits and vegetables

Appendix B

Characteristics of Training

Training plays an important role in the Hearth Program. All training has the following characteristics

- **Participatory:** all trainings use interactive and participatory techniques
- **On-going, process oriented:** each training follows the pattern:
 1. Training...
 2. Activity...
 3. Feedback...
 4. New training...
 5. Improved activity...
 6. Feedback

Example: the GMP activity requires 3 trainings over a period of 6 months

- **Skill oriented and practical:**
 1. Starting from participants' experience
 2. Building on existing knowledge and skills
 3. Extensive practice of newly acquired skill or reviewed skill
- **Community-based:** all trainings take place in a community
- **Multi-targeted:** training sessions involve different groups in the community to ensure clarity of understanding and consistency of program goal, objectives, activities and messages.

Example: In Vietnam, hamlet leaders (predominantly male) are invited to participate in the introductory part of all trainings.

Appendix C

Sample Question Guide For Focus Group Discussions On Malnutrition

Note: Precede **fact-finding questions** with the expressions "usually" or "normally" or "in your village," precede **attitudinal questions** with the expressions "in your opinion," or "according to you."

1-Questions for mothers of young children

Breast-feeding habits:

1. When does a mother start breast-feeding after delivery?
2. What do women in your village do with the colostrum? And why?
3. Up to what age does a mother usually breast-feed a child?

On complementary feeding:

4. At what age (month) are food or liquids other than milk introduced?
5. What is the first weaning food made of? How long is it used?
6. What foods are considered healthy for young children? Why?
7. What foods do mothers avoid feeding young children? Why?
8. How many times a day do young children get fed (meals and snacks)?
9. Do people other than the family also feed the child?
10. What problems do you have feeding your young children?
11. Who decides what the child can or cannot eat in the household?

2. Questions for mothers and other caretakers of young children

On common caring practices

1. How often are young children bathed? Hands washed?
2. How much time do you spend away from your children daily?

Health-seeking practices

1. What do you feed the child when he/she is sick?
2. When a child is sick, what foods should be avoided?
3. When a child is sick, whom do you seek for help first?
4. When your children have diarrhea, what do you do?

3. Questions for caretakers, Health Volunteers and members of VHC

Common beliefs about child sickness:

1. What common diseases do children in your community suffer from?
2. What illnesses or diseases most concern parents?
3. What causes children to have diarrhea?
4. What causes young children to have worms?
5. How can we get rid of worms?
6. What makes a child malnourished?

Common health-seeking practices:

7. What are the remedies people use against common illnesses?
8. What is a common remedy for diarrhea?
9. What do parents traditionally do to protect their children from illnesses?
10. What is your opinion about the local health staff?
11. In your opinion are vaccinations good for the child? Why?

Appendix D

Example of Situation Analysis Results (Nepal)

Area	Current practices
Local health services	<ul style="list-style-type: none"> • Services: inadequate, unreliable, no referral system Staff: unskilled and unmotivated, underpaid, constant turn-over • Health post: lack of equipment
Feeding practices	<ul style="list-style-type: none"> • Colostrum is not commonly fed to the newborn • In many cases newborns are fed goat milk, and breast-feeding is established after one week • Low frequency of breast-feeding the infant during the day because of mother's workload • Late introduction of complementary feeding • Weaning takes place early; almost all children are weaned between 9 and 12 months • Lack of variety of food for young children; they are usually fed soup made of pulses and left-over rice
Caring practices	<ul style="list-style-type: none"> • Young children are not supervised during feeding • Young children are under the care of untrained older siblings • Young children are not supervised at all • Poor body and food hygiene in the community at large
Health-seeking practices	<ul style="list-style-type: none"> • Little utilization of local health facilities • Seeking treatment of sick child by traditional healers or "quacks" • Low vaccination coverage • Poor utilization of ORS • No special food during illness and no extra food during recovery • Food taboos during illnesses
Maternal and Child Health	<ul style="list-style-type: none"> • No antenatal care available Low antitetanic vaccination coverage • Untrained TBAs assist women at delivery Use of unhygienic method to cut the umbilical cord Husbands and mother-in-law do not help women during pregnancy and post-partum period High workload throughout pregnancy • Poor maternal diet during pregnancy and after delivery; soup with molasses for 6 days after delivery

Appendix E-1

Examples Of Good Feeding, Caring and Health-Seeking Practices

GOOD FEEDING PRACTICES	GOOD CARING PRACTICES	GOOD HEALTH-SEEKING PRACTICES
<ul style="list-style-type: none"> • Exclusive breast feeding for about 6 months • Frequent breast feeding on demand, including night feeding, up to 24 months 	<ul style="list-style-type: none"> • Positive and caring interaction between child, caretakers and other family members • Supervising the young child at all times 	<ul style="list-style-type: none"> • Frequent breast feeding during and after child's illness
<ul style="list-style-type: none"> • Introducing appropriate complementary food at around 6 months 	<ul style="list-style-type: none"> • Using good hygiene around food: washing hands before processing and handling • Keeping drinking water covered 	<ul style="list-style-type: none"> • Mixing and administering ORS, or appropriate home-made equivalent food fluid, correctly, during episode of diarrhea
<ul style="list-style-type: none"> • Feeding the young child food with the appropriate consistency for his age • Semi-solid foods around 6 months • Soft foods 6 to 11 months • Finger foods/snacks around 9 months • Food from the family pot at 12 months 	<ul style="list-style-type: none"> • Using good hygiene around feeding the child: <ul style="list-style-type: none"> • washing child's hands and face before eating • Child does not eat food picked up from the ground 	<ul style="list-style-type: none"> • Treatment of the sick child: • Prompt recognition of danger signs • Timely seeking appropriate care when the child is recognized as seriously sick*
<ul style="list-style-type: none"> • Feeding a variety of foods daily in addition to breast milk: vegetables and fruits, animal products 	<ul style="list-style-type: none"> • Using good body hygiene: <ul style="list-style-type: none"> • washing hands with soap after defecating, and toileting child; keeping nails short, keeping away from human and animal excrement 	<ul style="list-style-type: none"> • Continued feeding and increased fluids during illnesses • Increase feeding immediately after illness
<ul style="list-style-type: none"> • Feeding the infant (6 to 12 months) at least 3 times a day 	<ul style="list-style-type: none"> • Active feeding: Feeding slowly and patiently • Assisting the older child who feeds himself • Encouraging the child with poor appetite 	<ul style="list-style-type: none"> • Getting the child completely immunized: • Taking infant for measles immunization as soon as possible after the age of 9 months • Taking infant for immunization even when sick
<p>* Looks unwell, not playing, not eating or drinking, fast or difficult breathing, high fever, excessive vomiting, lethargic or difficulty in waking, convulsions</p>		

Appendix E-2

Examples Of Poor Feeding, Caring and Health-Seeking Practices

POOR FEEDING PRACTICES	POOR CARING PRACTICES	POOR HEALTH-SEEKING PRACTICES
<ul style="list-style-type: none"> • Early introduction of food or liquid other than breast-milk • Delayed introduction of complementary food in the breast-fed child • Premature weaning • Traditional food restrictions in the diet of young children • Food taboos related to religious beliefs or tribal or caste customs • Lack of variety in the daily diet of the young child • Poor frequency of feeding (<2 meals a day) • Not enough food at each feeding 	<ul style="list-style-type: none"> • Lack of child supervision around feeding • Forced feeding, lack of interaction during feeding • Poor management of child with no appetite • Poor or lack of body hygiene • Poor food hygiene and unsafe drinking water usage • Poor hygiene around feeding: no washing child's hands before eating • Traditional gender biases regarding feeding • Lack of positive interaction between child and caretaker • Lack of continuous supervision of the young child 	<ul style="list-style-type: none"> • Reduction or complete cessation of breast feeding during child's illness • Cessation of breast feeding during maternal illness • Food restrictions during episodes of illness • Failure to identify danger signs and delayed seeking help for treatment of the sick child • Using harmful remedies to treat sickness • Seeking and following unqualified help in the treatment of the sick child • In case of diarrhea, failure to use or improper use of ORT • Restricted access to health services due to traditional customs

Appendix F

Standard Curriculum for the Training of Trainers in the Use of the Positive Deviance Approach in designing a Nutrition Intervention Based on the Hearth Nutrition Model (October 98)

Module 1 Learning about Malnutrition

- 1.1 Local language terminology of malnutrition
- 1.2 Types of malnutrition; signs of malnutrition
- 1.3 Facts about malnutrition & adverse effects of malnutrition
- 1.4 Causes of malnutrition (UNICEF framework); country and district specific analysis

Module 2 Orientation to Positive Deviance Approach

- 2.1 Analysis of needs and conventional approaches to solve malnutrition
- 2.2 Positive Deviance Approach: a new way to look at old problems
- 2.3 Positive Deviance and Nutrition; translation in local language (local proverbs)
- 2.4 Positive Deviance Inquiry and sustainability (investigating local ways-proverbs to illustrate self-reliance)
- 2.5 Understanding and exploring the role of household behaviors (feeding, caring and care-seeking) in health
- 2.6 Program design; conceptual framework

**Module 3 Conducting a situation analysis of malnutrition in the community
Qualitative assessment: Assessing the traditional or normal feeding, caring and health-seeking behaviors in the community**

- 3.1 Purpose of qualitative assessment; relation to Positive Deviance Inquiry
- 3.2 Review of existing information on traditional, wide-spread practices (KAP surveys, anthropological studies or monographs), participants' experience, etc.
- 3.3 Identifying the different groups for FGD (including volunteers, decision makers, caretakers of young children)
- 3.4 Skills and steps to conduct focus group discussion
- 3.5 Review and adaptation of FGD questions according to cultural context audience, content
- 3.6 Logistics for carrying FGD; selection criteria for participants
- 3.7 Compiling information
- 3.8 Role play

Field work: Conducting Focus Group Discussions in the community

**Module 4 Conducting a situation analysis of malnutrition in the community
quantitative assessment : Assessing the current nutritional status of all target group children (baseline survey/GMP 1)**

- 4.1 Conceptual framework/preliminary steps (review)
- 4.2 Purpose, tools: scales, growth charts, roster of all children in target group, weighing slip
- 4.3 How to identify month of birth, plotting and assessing current nutritional status of child

- 4.4 Feedback to the mother or caretaker after plotting
- 4.5 Organizing the weighing site (welcome/registration, weighing, plotting & counseling stations) and role-play.
- 4.6 Compiling results: community profile, malnutrition rates, malnutrition by sex and by age groups
Optional other information: prevalence of diarrhea and fever
- 4.7 Exploring ways to illustrate results and giving feedback to the community and creating community score board

Module 5 Preparing for the Positive Deviance Inquiry

- 5.1 Review overall conceptual framework of the PD approach
- 5.2 Purpose of PDI
- 5.3 Review of feeding, caring and health-seeking behaviors
- 5.4 Introduction of the 2 tools to carry out PDI/home visits:
Observation & guided interview (questionnaire), adapting the tools to local context, recording information; role-plays
- 5.5 Guidelines for home visits

Module 6 Introduction of PDI to the community: the steps

- 6.1 Step 1: Explaining malnutrition situation to community
 - * Sharing results of nutrition survey with community
 - * Explain short/long term adverse effects of malnutrition
 - * Reviewing the objectives of project/partnership with community
- 6.2 Step 2: Planning the PDI with the community
 - * Identify Positive Deviant children in the community
 - * Explain purpose of home visits (PDI); role-play
 - * Assist villagers to select PD and NPD families to visit, or other neighboring families (criteria for selection, wealth ranking)
- 6.3
 - * Set up schedule of home visits with community
 - * Review the participants' tasks & logistics during home visits
- 6.4 Review agenda for visit to the communities; assignment of tasks

- Field work:*
1. Carry out the baseline survey in one or two communities
 2. Compile results on the spot (# normal/malnourished, proportion)
 3. Provide immediate feedback on nutritional status of the children in the target group to community
 4. Identify well-nourished children who belong to very poor families
 5. Select PD and NPD families or other neighboring families to visit
 6. Logistics

Field work: home visits to PD families and NPD families or other neighboring families

Module 7 Reporting, selecting and documenting PDI Findings

- 7.1 Feedback session on PDI process
- 7.2 Report findings for each family visited
Compile and present findings from each visit in a matrix

- 7.3 Select & document key successful practices from the PDI findings
 - 1. Selecting key practices
 - 2. Summarizing findings
- 7.4 Provide feedback on PDI findings to the community
 Illustrate findings with model poster (good foods, good care, good health)
 Other ways to enable the community to learn about PDI findings

Module 8 Designing a Hearth Program using PDI findings

- 8.1 Facts about the adult learner
 Promote behavior change by -Learning by Doing-
- 8.2 Schedule a rehabilitation session (how many days in a month, time of day, length of daily sessions)
- 8.3 Make Menus (making a seasonal calendar), participants + food contribution
- 8.4 Include PDI findings in messages, protocols
- 8.5 Integrate PDI findings in other existing community based projects
 Investigate ways to develop multi-channel, multi-targeted strategies to enhance behavior change and promote good health-seeking behaviors in the entire community

Module 9: Monitoring and Evaluation

Monitoring

- 9.1 The community management of the Hearth Program: adapting the "Triple A" approach from UNICEF
- 9.2 Developing quantitatively achievable objectives and quantitative indicators of impact with the community
- 9.3 GMP as a monitoring tool to measure Hearth Program progress over time
 Monitoring vital events (births, deaths, migration); purpose, how

Evaluation

- 9.4 Quantitative evaluation Hearth Program participants, overall target population
 Schedule (after 6 mths, 1 year, 2 years)

Appendix G-1

Sample Observation Check-list During a PDI

1. Observation of members of the household

The well-nourished or malnourished child
Primary caretaker/mother
Secondary caretaker(s)
Siblings of the child
Father
Other family members (grandmother, uncles, aunts, helpers)

2. Observation of practices

Hygiene practices around food and eating
Feeding practices (active feeding/passive feeding, supervision, and type of feeding)
Family eating practices (eating together, priority to males)
Interaction between mother and child, or child with secondary caretaker
Other family members' interactions with the child
Personal hygiene (toileting, washing or bathing the child)
Food preparation
Water usage for drinking and washing

3. Observation of food availability

Quantity and variety of food in meal observed/other family meals
Food from the garden
Food from animal source
Storage of foods
Food preservation and food processing tools

4. Observation of household environment living quarters

(including cooking area, courtyard)
Home garden
Source of water
Latrine
Animals

Appendix G-2

**Sample of a PDI Observation Recording Form:
Body and Food Hygiene Practices**

Description	Comment
Hygiene	
Child, mother, other family members are clean	
Keep child's nails short	
Keep child away from animal excrement	
Mother/caretaker washes hands after toileting child	
Caretaker Hygiene Around Food & Water	
Wash hands before processing food	
Keep drinking water covered	
Keep food covered before eating	
Wash raw fruits and vegetables before eating them	
Hygiene Around Child's Feeding	
Wash child's hands and face before eating	
Child does not eat food picked up off the ground	
Child does not eat food touched by animals	

Appendix H

Standard Question Guide For Caretaker Interview

During PDI (Home Visits)

I- General introduction questions

How old is (name of selected child)?
 How many other children do you have?
 How old are they?
 How many people live in this household?

II-Questions on feeding practices

Are you (still) breast-feeding this child (name)? (If no move to #9)
 (If yes) how many times a day do you breast-feed your child? At night?
 Do you give food to your child in addition to breast-milk? (If no move to #15)
 (If yes) what food do you give your child beside breast-milk?
 When did you wean your child?
 How many times a day do you feed your child? How much?
 What food did you feed your child yesterday in the morning, midday, in the evening?
 Does your child eat from the family dish?
 What do you do when your child does not want to eat?
 Do other people in your neighborhood feed your child? If yes, what food?
 In your opinion, what foods are not good for young children? And why?
(Ask this question to other family members such as mother-in-law, father)

III- Questions on child care practices

Who cares for the child besides you every day?
 What does (this person) do for the child?
(If the secondary caretaker is present ask this question to him/her directly)
 How often do you bathe the child?
 How often do you wash your hands in a day? With what? For what reason?
 How long do you (mother) work outside the home?
 Do you take your child with you when you go outside the home?
 If you leave the child at home with other caretakers, what advice do you give them?
 How much time (hours) do you spend with your child every day?

IV-Questions on health-seeking practices/Diarrhea

Has your child suffered from diarrhea in the last 2 weeks?*(if no go to #26)
 (If yes) How did you treat it?
 What do you do when your child has diarrhea?
 (If the mother or caretaker mentions ORS) How do you use it?
 Do you keep ORS packets at home?
 (If yes and if situation permits, ask to see the ORS packets) Can we see it?
 What food and liquid do you feed your child when he/she has diarrhea?
 When your child has diarrhea, what food and/or liquid do you avoid feeding him/her?

* Diarrhea: 3 or more loose stools in a day

ARI

Has your child had a cough associated with fast or difficult breathing in the last 2 weeks?
(If no, go to question # 34)
(If yes) How did you treat it?

Seeking treatment for the sick child

When your child is sick (ear, eye, skin infection), what do you do?
When do you take your child to the health center? To the district hospital?
Has your child been fully immunized?
(if yes ask to see the immunization card/document)

V Questions to other family members (decision-makers)(Identify whom to interview, i.e., mother-in-law, father)

Interview with mother-in-law

According to you, at what age should a baby start taking food in addition to breast-milk?
What are good foods for young children (under 1, under 2 or 3) and why?
What foods should be avoided and why?

Interview with father

According to you, is your child healthy? Why?
How much time do you spend with this child every day?
What do you do with the child?
What do you do when your child is sick?
In your household, who decides when to get help when child is sick?

Appendix 1

Case Study: Sanar Abudo From Mozambique (November 1997)

Sanar Abudo is a 4-month-old infant, the youngest of 7 children. He weighed 4.3 kg at last month's weighing session carried out by the mobile district team. His mother, Azira, is still practicing exclusive breast feeding and indicated that she will start Sanar on complementary feeding when he is 5 months old as she did for his older siblings. Currently only the 3 youngest children live with their mother while the 4 older ones live with their grandmother in another part of the village. The mother is single and unable to manage all 7 children herself. The house, surrounded by cashew trees and mango trees, consists of 1 room with an area for cooking. It is swept and tidy. The family does not own any chickens or other domestic animals. There is still some dried cassava in store, 3 months after harvest.

All 3 children look clean and alert. The mother reported feeding her children all kinds of food, such as vegetables, peanuts, cashew nuts and coconut. Because she lives near the coast, Azira goes to the beach on a daily basis to pick up seafood, such as sea snails and small crabs. She gave us a handful of seafood as she was preparing her family lunch, seafood cooked with vegetables. She feeds her children 3 times a day, unusual in this community where most eat only twice a day. Breakfast consists of porridge made of manioc flour mixed with molasses made from the cashew fruit. Azira told us how she stores the molasses to last her 4 months. She gave us some molasses to sample; it was sweet and tasty. She showed us how she processes cashew fruit into molasses since this is the season to harvest the nuts. Most people disregard the cashew fruit because they have forgotten how to process it or do not have a sieve to make it.

For dinner yesterday the mother fed her 2 older children the traditional chima (cassava flour and water) with fish and tomatoes, and the three of them shared a mango. Like most people in the village, she avoids feeding her children eggs, liver, ripe banana, or a certain fish (Nguri) sharing the common belief that these foods give children diarrhea.

During meals, the oldest child eats by herself from her own plate, while Azira eats with the 3-year-old child to assist him while eating. Unlike many other village mothers who leave their young children under the care of older siblings or neighbors, Azira insists on looking after her children herself. When her children look sick the mother seeks help first from the traditional healer. But when her children are seriously ill, she goes straight to the hospital.

Appendix J

Sample Of Educational Curriculum for a 12-day NERS

DAY	MAIN TOPIC	CONTENT	ACTIVITIES
Day 1	Breast-feeding	<ul style="list-style-type: none"> • Breast-milk as the best food for the infant • Benefits of colostrum • Immediate initiation of breast-feeding after delivery • Exclusive breast-feeding for at least 3 months, • Breast -feeding duration (up to 24 months) 	<ul style="list-style-type: none"> • Discussion • Use of interactive visual aids (poster) delivering the message
Day 2	"Good foods" variety of food	<ul style="list-style-type: none"> • Inventory of foods for children available in the village • PD foods • Daily food contribution, NERS menu • Importance of fat in the young child's diet • Feeding the child 3 meals a day, and snacks in between 	<ul style="list-style-type: none"> • Discussion • Use of NERS menu ingredients Message, games, poster
Day 3	Complementary feeding	<ul style="list-style-type: none"> • When to introduce complementary feeding • Why introduce new food in addition to breast-milk, • Ingredients for a complementary food • Consistency and quantity, method of feeding 	<ul style="list-style-type: none"> • Discussion • Recipes for complementary feeding • Message Poster
Day 4	Good child care	<ul style="list-style-type: none"> • Personal hygiene • Hygiene around feeding • Supervision during feeding • How to feed the child with poor appetite 	<ul style="list-style-type: none"> • Discussion • Practice during NERS session, • Message
Day 5	Good health care	<ul style="list-style-type: none"> • Environmental and food hygiene • Promotion of vaccination and regular weighing • Diarrhea: treatment of diarrhea at home (symptoms, diet, use of ORS-demonstration) • Identification of danger signs and seeking help, • Prevention of diarrhea 	<ul style="list-style-type: none"> • Demonstration of how to use ORS packages, or home made equivalent • Message

Day 6	Keeping children healthy at home	<ul style="list-style-type: none"> • Use of PD foods at home • Practicing good hygiene around food and eating, • Maintaining good personal and environmental hygiene 	<ul style="list-style-type: none"> • Discussion • The model family chart
Day off		Practicing at home	
Day 7	Breast-feeding	<ul style="list-style-type: none"> • How to increase breast-milk production • Breast-feeding during maternal or child illness • Maternal diet during lactation • Breast-feeding and spacing children 	<ul style="list-style-type: none"> • Discussion • Interactive visual aids, poster • Message
Day 8	Good foods	<ul style="list-style-type: none"> • Review items from day 2 • Role of different foods for adequate growth (4 food groups) • Review NERS menus 	<ul style="list-style-type: none"> • Discussion • Use of NERS menu ingredients • Message, games, poster
Day 9	Complementary feeding	<ul style="list-style-type: none"> • Review the items covered on day 3 • Complementary feeding • Breast-feeding 	<ul style="list-style-type: none"> • Poster • Recipes for complementary feeding • Message
Day 10	Good child care	<ul style="list-style-type: none"> • Positive and frequent interaction with the child • Display of affection • Supervision at play and at all times 	<ul style="list-style-type: none"> • Hand games • Songs
Day 11	Good health care	<ul style="list-style-type: none"> • Review day 5 • Treatment of the sick child at home • ARI: identification of danger signs of ARI • Diet during and after illness • Care seeking • Prevention 	<ul style="list-style-type: none"> • Discussion • Demonstration of breathing patterns • Review of message
Day 12	Keeping children healthy at home	<ul style="list-style-type: none"> • Use of PD foods at home • Practicing good hygiene around food and eating • Maintaining good personal and environmental hygiene 	<ul style="list-style-type: none"> • Discussion • Family Model poster • Message

Appendix K

Example of Qualitative Hearth Impact (SC/Japan. Nepal)

A- Physical and psychological changes in the child

All mothers participating in NERS describe changes in their child's physical and psychological condition as follows:

- More active, less thin, asks for more food
- Less crying or whimpering; changed from being lethargic to being alert

B- Behavior change in the caretaker

Through direct observations and interviews, the volunteers documented the following change in caretakers' behavior:

Feeding practices:

- Use of new foods in children's diet (Positive Deviant foods), i.e., snails, green leafy vegetables and fruits in daily diet of young child
- Increased number of feedings or snacks given at home
- Mothers insist on feeding or supervising their child during meals

Child Caring practices:

- More frequent bathing, nail cutting, combing hair, washing hands before feeding the child
- Mothers are spending more time with their child than before and are more aware of the importance of frequent interaction with their child
- Mothers give appropriate advice for child's care to the secondary caretaker when she goes out

Health seeking practices in the community:

- Increased immunization coverage
- Increased frequency of visit to health posts
- Most parents take their child to health post when sick (Report January 98)

RECOMMENDED READING

Nutrition:

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