

The Story of LINKAGES-AED in Madagascar

Using the Essential Nutrition Actions to Improve the Nutrition of Women and Children

1997 - 2004

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Preface

Today in 2004 there remains great interest in international circles on how to reduce under-five mortality. It is generally accepted that we know what to do, however the challenge that remains is how to implement broad scale programs to reach large numbers of at-risk children that are both practical and effective.

Recently a group of eminent scientists confirmed that improved breastfeeding could avert upwards to 13 percent of under-five deaths (Jones et. al., *The Lancet*, Vol. 362, 2003). These authors went on to state that "...a group of effective nutrition interventions, including breastfeeding, complementary feeding, vitamin A & zinc supplementation could save about 2.4 million children each year (25% of child deaths)".

The LINKAGES-AED project has experience with implementing such a broad scale effort to improve nutrition in the Indian Ocean country of Madagascar (population 15 million) through support given to breastfeeding practices in the context of the Essential Nutrition Actions. The approach taken by LINKAGES-AED with its local partners was based on a behavior change communication strategy aimed at improving nutrition practices of Malagasy mothers and families. Over the period from 1997 to the present time, LINKAGES-AED worked closely with the Government of Madagascar and other in-country groups in a partner-wide effort to strengthen nutrition relevant policies, guidelines, human resources, and community activities. At one point in time the program was active in 23 districts and covered a population of 6 million. Field assessments carried out through the lifetime of the program showed that significant results were achieved, namely an improvement in exclusive breastfeeding practices from a baseline level of 46 percent to a peak level of 83 percent in target communities. In addition, a second generation expansion of a streamlined approach of the original LINKAGES-AED community level breastfeeding strategy showed improvements in exclusive breastfeeding levels in program sites from 29 percent to 52 percent within a 10 month period. These results indicate great potential for replication elsewhere in the country.

The intent of this publication is to document the major elements of the LINKAGES-AED program in Madagascar in a way that is useful to planners and programmers interested in improving breastfeeding and other nutritional practices at large scale.

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Photos: LINKAGES
Antananarivo Madagascar, September 2004

Acknowledgements	
Preface	
Table of Contents	
1. Introduction	1
2. The Essential Nutrition Actions (ENA) Approach	4
3. Building Partnerships for Action	8
4. Nutrition Strategy Development through the GAIN	10
5. Nutrition Policy Analysis and Advocacy using Profiles	12
6. Implementing ENA through Behavior Change Communication	14
7. Using the Mass Media to Promote ENA	17
8. ENA Capacity building: Pre-service Training	20
9. The Baby-Friendly Hospital Initiative	22
10. ENA Capacity Building: In-service Training	25
11. Nutrition Volunteers as Agents of Change	29
12. Impact Results	32
13. Lessons Learned	39
Annex 1: Chronology of events of LINKAGES-AED in Madagascar	42
Annex 2: Comparison between BASICS I and LINKAGES/JSI	46
Annex 3: List of districts in which LINKAGES-AED and JSI worked	47
Annex 4: List of ENA messages used in Madagascar	48
Annex 5: VIPP Methodology	49
Annex 6: List of printed IEC materials	50
Annex 7: List of training modules	52
Annex 8: List of reports	53
Annex 9: List of LINKAGES staff	55

1. INTRODUCTION

Malnutrition in Madagascar

Malnutrition is a critical public health issue in Madagascar, and is an underlying cause of death in 54 percent of all under five children. One Malagasy infant in ten dies during the first 12 months, and one child in six dies before the age of five (DHS 1997). Among 19 sub-Saharan African countries for which Demographic Health Survey data are available, Madagascar has the highest proportion of children under three who are stunted (low height for age). Indicators of the levels of malnutrition in Malagasy women and children are shown below:

Children:

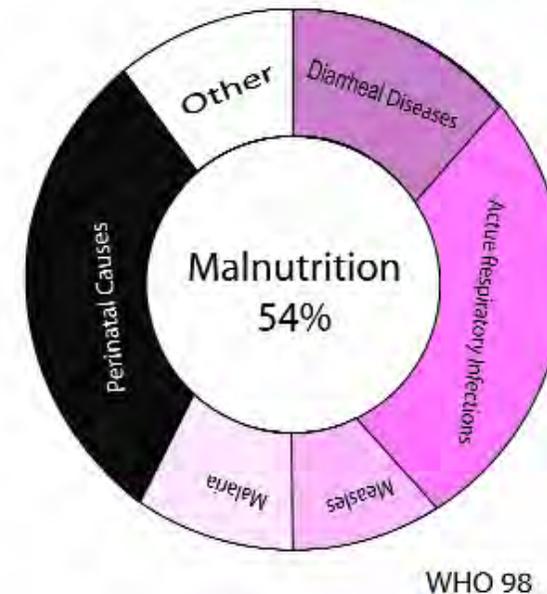
- At birth: 26% low birth weight
- 2 years: 60% stunted
- 3 years: 40% underweight, 67% anemic, 42% vitamin A deficient

Women of Reproductive Age:

- 42% anemic
- 9% vitamin A deficient
- 21% body mass index (BMI) below 18.5 kg/m²

Sub-optimal breastfeeding practices are a major cause of infant mortality. The World Health Organization and Madagascar's National Health Policy recommend exclusive breastfeeding from birth to six months.

Causes of Child Mortality in Madagascar



During the first six months, rates of diarrhea and respiratory infections are lower among exclusively breastfed infants than partially breastfed infants. In Madagascar only half of all infants under six months of age are exclusively breastfed (DHS 1997).

Description of LINKAGES-AED Phase I, II and III

Addressing these serious malnutrition problems requires the commitment, resources, and collaboration of government, donors, and non governmental organizations (NGOs). With funding from the United States Agency for International Development (USAID), LINKAGES-AED first began working with the Ministry of Health in Madagascar in 1997, and continued expanding its approach and coverage with new partners through to 2004.

(See Annex 1 for a chronology of events)

It is important to recognize work which took place prior to this time, from which lessons were learned and certain approaches adapted and continued. From 1995 to 1998 the Ministry of Health and USAID, through the BASICS I Project, introduced a new strategy known as the Essential Nutrition Actions (ENA) approach in two pilot districts of the highland provinces of Antananarivo and Fianarantsoa. At that time the BASICS I project reached 700,000 people and focused on breast-feeding and the Essential Nutrition Actions, immunization, and the start-up of community Integrated Management of Childhood Illness. Certain elements of the BASICS I project were adapted by LINKAGES-AED with its field partners to expand support for nutrition to large segments of the population across the country.

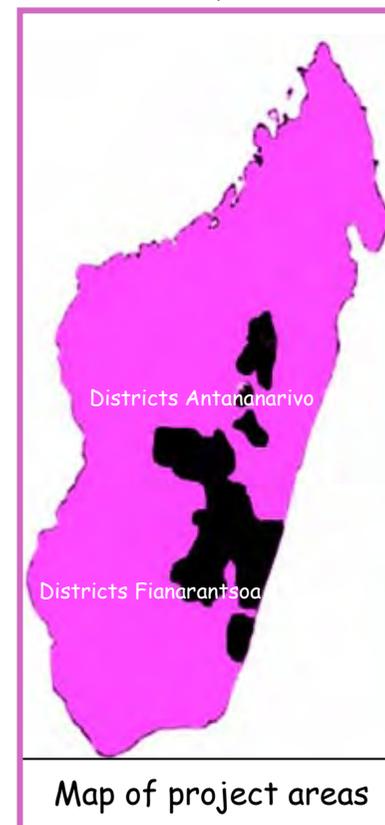
(See Annex 2 for the comparison between BASICS I and LINKAGES-AED/JSI)

There were three distinct phases of LINKAGES-AED presence in Madagascar, which are described below.

Phase I: National Policy Activities. For the first two years (1997-1999), LINKAGES-AED provided support to the Ministry of Health for national policy activities, particularly the establishment and coordination of an intersectoral nutrition action group, known as the GAIN (Groupe d' Actions Intersectoriel pour la Nutrition).

Phase II: District and Community Activities. In 1999 LINKAGES-AED joined forces with the USAID-funded bi-lateral Jereo Salama Isika project, managed by John Snow International, and began to

implement a district focused program in 10 districts of Antananarivo and Fianarantsoa provinces, which cover more than half of the population of Madagascar. LINKAGES-AED built its community approach on the IMCI strategy adopted by the MOH and supported by JSI, UNICEF, and WHO, as well as on BASICS I project's communication strategy of promoting small 'do-able' actions with easily recognizable health benefits. This allowed an integrated approach involving training, community mobilization, and harmonization of IEC messages and materials on child survival and nutrition. As part of the strong field alliance forged with JSI's reproductive health activities, the Lactational Amenorrhea Method (LAM) was also added as one of the modern family planning methods offered in the 10 districts. In 2001 the program between LINKAGES-AED and JSI expanded to 13 more districts, nearly doubling the catchment area in Antananarivo and Fianarantsoa from 3.3 million to about 6 million. In addition, the program reached a significantly larger population through the mass media and IEC materials used throughout the country, and training provided to NGOs working in districts outside of the 23 program districts.



Phase III: Provincial Focus. Starting in late 2002 LINKAGES-AED began to re-focus its efforts from the district to the provincial level through a 'provincial package' of breastfeeding and ENA interventions which included support to

1. provincial level GAIN comprised of government, NGO membership,
2. the promotion of LINKAGES-AED's new self-learning ENA training module for health workers,
3. mass media, especially radio and television,
4. the Baby Friendly Hospital, Clinic and Workplace initiatives,
5. pre-service medical and paramedical training which included improvement of both facility and community aspects of practical training sessions, and
6. the training of private doctors in breastfeeding and ENA.

In early 2003, with co-funding by the Global Forum and USAID, LINKAGES-AED was able to expand this "provincial package" to three districts of the two coastal provinces of Tulear and Mahajanga covering a population of 1.4 million. This provincial focus continued until 2004.

After 2004, LINKAGES-AED's support to Madagascar will continue to strengthen the past achievements made in breastfeeding, however, will intensify the focus on issues of appropriate complementary feeding and the feeding of the sick child.

Responding to Unanticipated Interruptions

in Program Activities,

October 2001 to August 2002

During the course of LINKAGES-AED's presence in Madagascar there was one significant period when field activities had to be halted. First in October 2001 the MOH dictated that all USAID grants for field activities were to be frozen. As a result many activities were interrupted, including the community activities supported by LINKAGES-AED and JSI under Phase II. Immediately following this was a political crisis which arose from the presidential elections held in December 2001 and which lasted until August 2002. This crisis paralyzed the country and led to the suspension of all development activities including those implemented by LINKAGES-AED and JSI. The economic and social structures of the country were heavily affected due to a variety of circumstances, including economic and transportation blockades that prevented the free circulation of people and food. Food insecurity became the norm and households were faced with food shortages throughout the country during this time. To respond to these evolving needs, LINKAGES-AED developed a training module 'ENA during times of crises', and provided this to the staff of government and NGO groups responding to the nutrition aspects of the emergency. The political crisis was eventually resolved in August 2002. However, with the imminent end of the JSI bi-lateral in Madagascar in May 2003, LINKAGES-AED began to re-focus its program from the district to the provincial level, as described in Phase III.

2. The Essential Nutrition Actions Approach

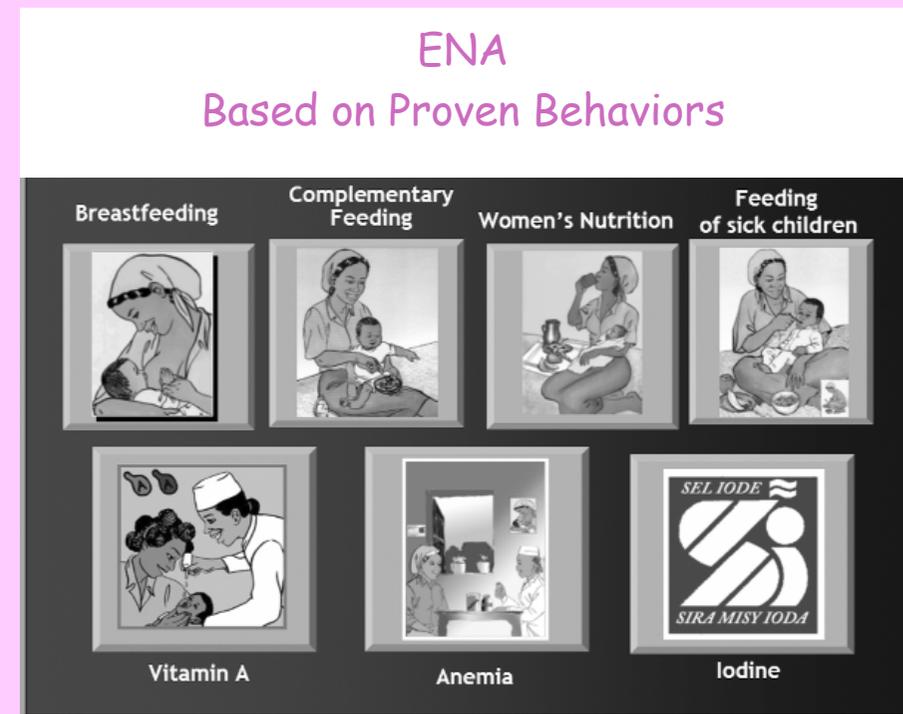
Seven Essential Nutrition Actions

In light of the serious malnutrition problems facing the country, the Malagasy Government has adopted the ENA approach to address the situation.

In this regard, LINKAGES-AED has supported the efforts of the Nutrition Service of the Ministry of Health to develop the ENA approach at all levels, from national policy initiatives to community support for mothers and families.

The ENA approach focuses on achieving improved behaviors in seven key areas including the:

- 1) promotion of optimal breastfeeding during the first six months;
- 2) promotion of appropriate complementary feeding beginning at six months, with continued breastfeeding to two years and beyond;
- 3) promotion of feeding of the child during and after illness;
- 4) control of vitamin A deficiency (breastfeeding, consumption of fortified and vitamin A-rich foods, maternal and child supplementation);
- 5) control of anemia (maternal and child iron supplementation, deworming, malaria control, consumption of fortified and iron-rich foods);
- 6) control of iodine deficiency disorders through the consumption by all families of iodized salt; and
- 7) promotion of improved women's nutrition (increased food intake during pregnancy and lactation, iron/folic acid supplementation, treatment and prevention of malaria, deworming during pregnancy, postpartum vitamin A supplementation).



The ENA approach promotes messages that encourage "**small do-able actions**" that can be taken at specific times in the life cycle to improve the nutrition of children under two years as well as women of reproductive age. These messages were developed from formative research conducted in the program sites in order to ensure their relevance for local circumstances affecting nutritional practices.

For example, in regard to optimal breastfeeding, the behaviors promoted include the initiation of breastfeeding within the first hour of birth, exclusive breastfeeding for six months, frequent breastfeeding (day and night at least 10 times during the first six months), correct positioning and attachment, and emptying one breast before switching to the other. A list of ENA messages promoted by LINKAGES-AED is given in Annex 4.

Six Contact Points: The Lifecycle

In Madagascar the ENA approach has expanded contact points to promote nutrition well beyond traditional growth monitoring and promotion activities. Using the 'lifecycle approach' six key contact points have been identified as they provide an opportunity for health worker counseling and interactions with pregnant and lactating women and with mothers of children under two years of age. These contact points include during pregnancy, delivery and immediately postpartum, postnatal and family planning contacts, as well as during immunization, growth monitoring/well child, and sick child consultations.

To support the work of health workers, community workers promote the ENA behaviors during their educational talks at health centers and during home visits, informal encounters with peers, and community festivals. Local mass media reinforce the ENA messages given by health workers and nutrition volunteers.

ENA
Translated into Actions at Key Contacts in the Lifecycle

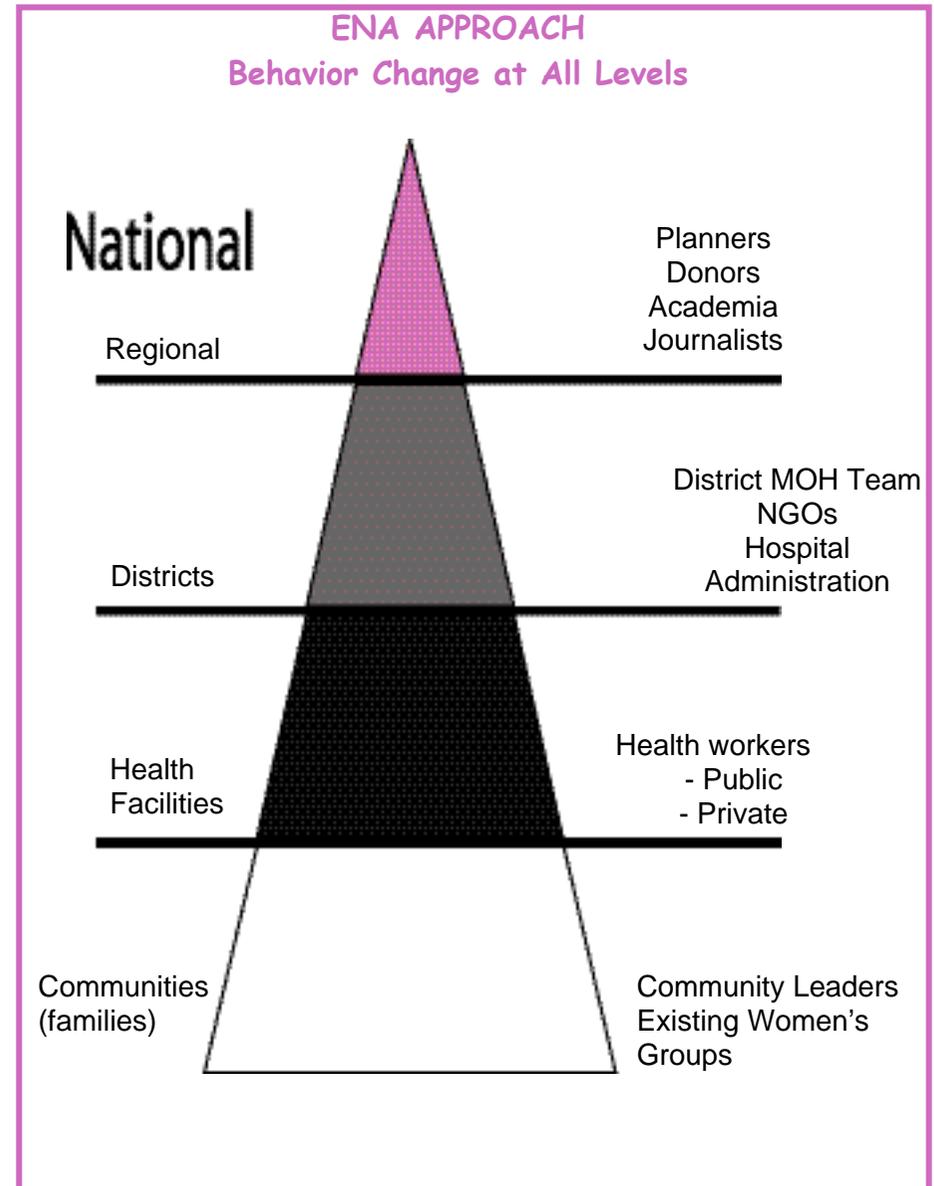
 <p>PREGNANCY : TT, antenatal visits, iron/folic acid, de-worming, anti-malarial, diet, EBF, risk signs, FP, STI prevention, safe delivery, iodized salt</p>	 <p>DELIVERY: safe delivery, EBF, vitamin A, iron/folic acid, diet, FP, STI prevention</p>
 <p>POSTNATAL AND FAMILY PLANNING: EBF, diet, iron/folic acid, diet, FP, STI prevention, child's vaccination</p>	 <p>IMMUNIZATION: vaccinations, vitamin A, de-worming, assess and treat infant's anemia, FP, and STI referral</p>
 <p>WELL CHILD AND GMP: monitor growth, assess and counsel on feeding, iodized salt, check and complete vaccination/ vitamin A /de-worming</p>	 <p>SICK CHILD: monitor growth, assess and treat per IMCI, counsel on feeding, assess and treat for anemia, check and complete vitamin A /immunization/ de-worming</p>

Support to ENA at All Levels

The ENA approach in Madagascar is based on an integrated nutrition package that is promoted at all levels, from national to community. Key to the successful implementation of ENA is the development of a good policy environment for nutrition, and this requires effective advocacy, particularly at the national level with planners, donors and other important stakeholders such as university staff, non-governmental organizations, and members of the mass media. Another important element is the harmonization of nutrition program approaches to ensure consistency of key nutrition messages and IEC materials. Developing partnerships, at all levels, with groups implementing nutrition related activities helps to expand coverage of ENA support to children and women. Support in capacity-building in ENA is also important for staff of basic health facilities as well as staff of district and provincial hospitals. Lastly, but equally as important, is developing the capacity of community leaders and community members to become advocates for improved nutrition, as well as provide peer support to mothers and families to improve infant and young child feeding practices and other ENA practices.

Breastfeeding as an Entry Point

In Madagascar LINKAGES-AED consistently used breastfeeding as the initial entry point to introduce the ENA approach at all levels, from national to district to communities. In the joint LINKAGES-AED and JSI program breastfeeding also served as the common ground between IMCI, reproductive health and other nutrition and health programs, thus making it an integrating factor connecting a number of programmatic domains. For example the Lactational Amenorrhea Method (LAM) was incorporated into the breastfeeding aspects of LINKAGES-AED ENA training and, LAM was incorporated into JSI's family planning training. The experience of using breastfeeding as a unifying link between these two program domains proved very successful in the 23 focus districts of LINKAGES-AED and JSI.





- delivering age-appropriate nutrition services and messages through key contact points in the health system and in the community;
- using appropriate media (electronic, print, interpersonal, event, and traditional) to reach specific audiences; and
- harmonizing nutrition messages with other health programs (IMCI, reproductive health, food security, emergency, etc.), and with other sectors such as education and agriculture.

To help ensure that the ENA messages mothers receive are correct and delivered in an appropriate way, LINKAGES-AED trained partners in both the technical content of the ENA approach as well as in the necessary communication skills.

Behavior Change Communication for Promoting ENA

In Madagascar, behavior change communication (BCC) was a vital element for implementing the ENA approach. Key nutrition behaviors were promoted in the form of small do-able actions through a variety of BCC channels, including interpersonal communication using counseling and negotiation techniques with mothers and other child caretakers, community mobilization activities, as well as a variety of mass media channels. Emphasis was given to:

- promoting feasible ("do-able") ENA actions families can take through targeted, concise messages to achieve the desired outcomes;

3. Building Partnerships for Action

LINKAGES-AED built its program on the premise that strategic alliances for the ENA approach with technical and programmatic partners forge a common vision, allow for rapid program expansion, and encourage sustainable activities. In addition, a broad array of partners helps to ensure consistency in program approaches, especially messages and IEC/BCC materials. These partnerships and the harmonization it brings are considered important to achieve wide scale impact. In developing strategic plans with its partners, LINKAGES-AED used a dynamic, people-centered approach known as Visualization in Participatory Programs (VIPPP), described in Annex 5. This approach helped to ensure the necessary buy-in of partner groups to the entire process of program design and development. Each of the partners working with LINKAGES-AED offered a particular set of skills, outreach, and geographic coverage. The roles of each are described below.

Ministry of Health, Nutrition Unit. An active Nutrition Division (SNut), located in the Ministry of Health, played a critical communication and coordination role in introducing the Essential Nutrition Actions approach. The SNut, headed by a medical doctor with a small group of support staff, invited major nutrition stakeholders in the government, donor, and university communities to participate in the development of the ENA approach from the beginning. This process led to the necessary 'buy-in' from field implementers and funding agencies and helped to ensure that follow-on activities were implemented using harmonized approaches, messages, and protocols.

AED and JSI. USAID, through its Mission in Madagascar as well as its Global Health Bureau and Africa Bureau, funded the Academy for Educational Development (AED) to improve infant nutrition and child survival through the LINKAGES-AED Project. The Mission also provided support to John Snow, International (JSI) to improve child survival and reproductive health through the bi-lateral Jereo Salama Isika project.

Over the period from 1999 to 2003 the two projects joined forces to achieve their objectives and increase program coverage. This allowed an integrated approach involving training, community mobilization, and armonization of IEC messages and materials on child survival and nutrition. In addition, USAID/Madagascar also established an innovative mechanism to fund MOH Management Teams in the districts and region within which LINKAGES-AED and JSI were working. This allowed more ownership and creative input by local health authorities into the planning, implementation and evaluation of the activities taking place. In each of the 23 districts, a team of two field agents was assigned, one employed by LINKAGES-AED and one employed by JSI. Most of the field agents were medical doctors. Together they worked with the district MOH management teams, under the supervision of the provincial medical director, in the implementation of nutrition, child survival, and reproductive health activities. The field agents assisted district-level MOH personnel in their training and supervision efforts. The LINKAGES-AED agents conducted ENA training for health workers and nutrition volunteers, as well as mobilized, coordinated, and supervised nutrition activities in community and health facilities. They served as a link between community-based organizations and the MOH on community nutrition approaches. The JSI agents provided training and support in immunization, reproductive health, and non-nutrition aspects of IMCI.

An Innovative Approach to Funding Health Activities

USAID/Madagascar initiated a decentralized funding system (PILS) with the District MOH Management Teams in 20 districts and the Provincial MOH Management teams in the two provinces of Antananarivo and Fianarantsoa. The grant for the provinces was used to implement interventions in the districts without a PILS grant.

This mechanism allowed for decentralized planning and management of the funds. A locally hired private firm assisted the MOH Teams to manage funds according to USAID regulations. JSI and LINKAGES-AED, respectively, were the technical agencies assisting them to plan and implement the field activities supporting nutrition, child survival and reproductive health.

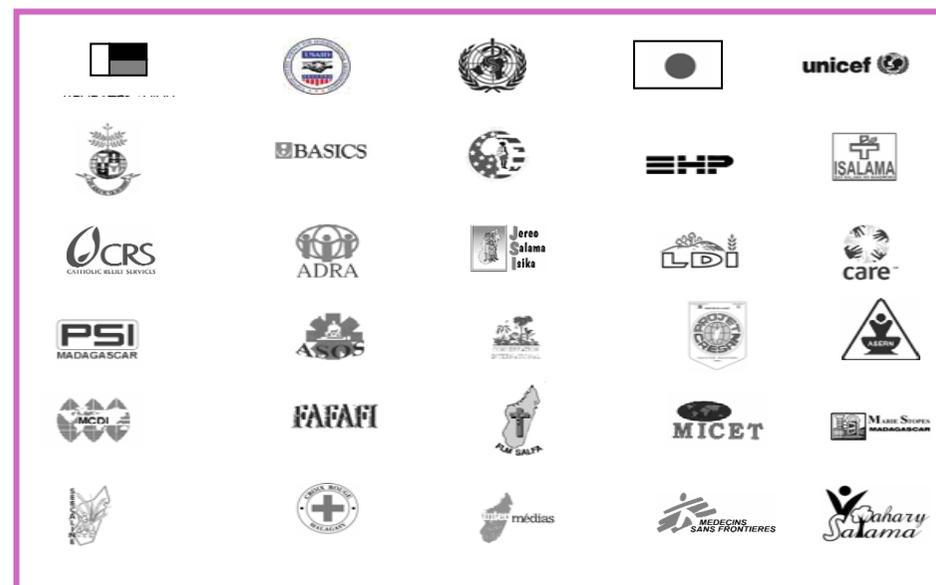
Over the period from 1999 to 2001, more than US \$2.3 millions was allocated, with an average of \$94,000 per district, and \$245,000 per province.

Community-based associations and NGOs. Grassroots organizations implemented the vast majority of the community ENA activities. LINKAGES-AED provided them with short-term technical assistance, support to training, as well as IEC materials. In addition, it assisted NGOs implementing USAID Title II programs and /or receiving USAID centrally funded grants.

Donor community. Technical partners included other USAID projects (such as MOST, Measure Communication, Health and Environment), as well as PSI, UNICEF, WHO, and the World Bank. A two-year memorandum of understanding (MOU), signed in early 1997 between USAID and UNICEF, outlined the workplan for UNICEF and USAID-funded nutrition projects, including LINKAGES-AED.

The donor community actively participated in national policy activities and shared costs for training, workshops, media, translation, and dissemination of materials. Examples of ways in which the partners supported the ENA include the:

- supply of vitamin A capsules by UNICEF
- technical assistance and financial support of the Iodine Deficiency Disorders program by UNICEF
- development of IEC materials on vitamin A supplementation and monitoring supplementation activities by the MOST Project
- provision of health booklets by JSI, UNICEF, and LINKAGES-AED
- promotion of appropriate feeding of the sick child (within IMCI context) by JSI
- promotion of infant and young child feeding and women's nutrition behaviors by LINKAGES-AED



4. Nutrition Strategy Development through the GAIN: Intersectoral Nutrition Action Group

Establishing a Critical Mass of Nutrition Action-takers

Part of the process of advocating for nutrition at the national level and creating an enabling environment for addressing malnutrition requires the development of a critical mass of individuals committed to taking action on nutrition. In Madagascar this critical mass is represented by the Groupe d'Actions Intersectoriel pour la Nutrition (GAIN) which was formed in late 1997 to serve as a focal point for all nutrition policy and strategy development in the country, as well as inter sectoral coordination. Donors, especially USAID and UNICEF, were central in the formation of the GAIN, and have from the beginning provided small amounts of funding to cover the costs of regular meetings and workshops.

The GAIN is an informal organization that continues to operate and move forward supported by the enthusiasm of its members rather than by a constitution and by-laws. While the entire GAIN meets every quarter, a number of mini-task forces meet on a monthly basis to discuss key nutrition topics and carry out tasks identified by the whole GAIN. The Director of Preventative Medicine in the Ministry of Health (MOH) convenes meetings, and the Nutrition Division from the Ministry of Health serves as the chair of the GAIN. Today over 75 individuals representing 50 groups from different government ministries, the university, local NGOs and international donors are members of the GAIN. In order to ensure that meetings are fully participatory as well as interesting, the Visualization in Participatory Programs (VIPPP) approach is used for facilitation (see Annex5).

Objectives of the GAIN

- 1) To develop & harmonize nutrition actions,
- 2) To facilitate information exchange among partners,
- 3) To allow new program and scientific knowledge to be incorporated into nutrition field activities, and
- 4) To allow lessons learned from the field level to be transferred to nutrition planners at higher levels.

In order to decentralize the process of nutrition coordination, the GAIN has begun to be decentralized through the formation of provincial GAINs. This is intended to re-create the dynamism of the national GAIN closer to the point of implementation of field programs. By 2004, in addition to the national GAIN, functioning GAINs had been established in five of the country's six provinces, Antsirabe, Fianarantsoa, Tulear, Mahajanga and Toamasina.

Achievements of the GAIN

Since 1997, the major products of the GAIN include:

- Draft National Nutrition Policy (2003-2004)
- Update of the "National Nutrition Policy's Plan of Action" (2002-2004)
- Regular training on "Essential Nutrition Actions" for GAIN members (2001-2004)
- Standardization of the Monitoring & Evaluation protocol for GAIN nutrition partners (2001-2004)
- Development of the ENA Strategy for the health sector to promote key nutrition actions for children and women at critical contact points of health service delivery (October 2000);

- Identification and standardization of key nutrition messages to be used by all members of the *GAIN* in their nutrition programming (March 2000);
- Support for the development of a mass media strategy to promote nutrition behavior change (2000-2004);
- Production of IEC field tools that promote maternal and child health nutrition, including counseling cards, women's health card, and ENA Job Aids for health workers (December 1998);
- Development of a field strategy to support the Baby Friendly Hospital Initiative (June 1999);
- Adoption of the wide-spread presentation of Profiles, a computer-based nutrition advocacy tool that estimates the consequences of malnutrition on a population's health, education and economy (July, October 1999-2004) ;
- Development and agreement of micronutrient protocols fortification, iron and iodine (Since December 1998); and
- Training of journalists on breastfeeding promotion and ENA (1998-2004).

By 2004 . . .

National *GAIN*

21 *GAIN* meetings were held with 816 participants

(by June 2004)

12 *GAIN* workshops/trainings were held involving
338 participants

Provincial *GAINS*

26 meeting with 542 participants

12 training with 143 participants

Lessons learned

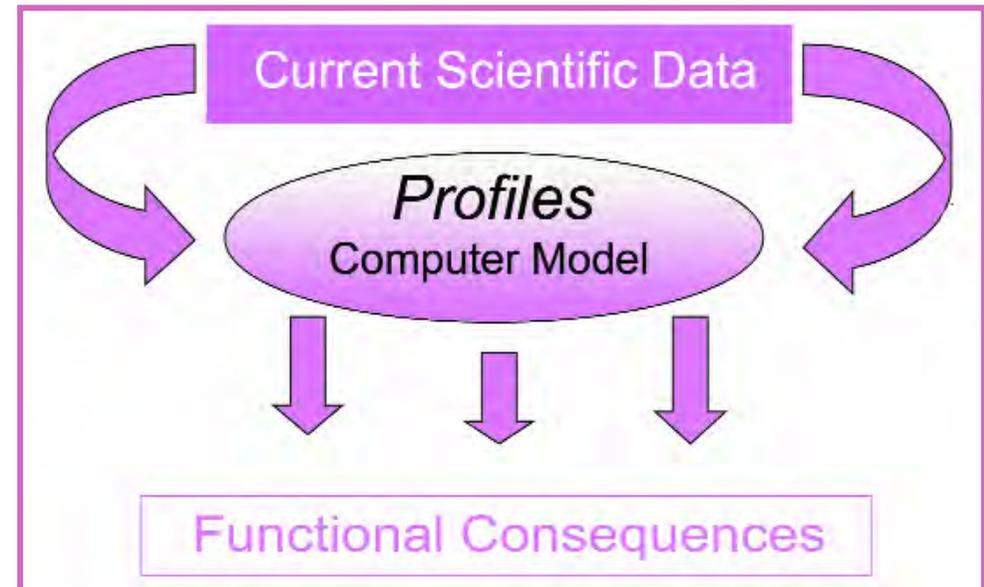
The *GAIN* concept has been shared internationally through conference presentations, study tours of nutrition representatives from other countries, as well as through the World LINKAGES-Madagascar publication. The *GAIN* concept is unique to Madagascar and has proven effective and worthy of replication in other settings. In October 2000 LINKAGES-AED evaluated the usefulness of this collaborative approach by interviewing participants of the *GAIN*. In general, participants included in the study found the *GAIN* to be a very useful coordination and networking mechanism and appreciated its accomplishments. In terms of overall impact of the *GAIN* at the field level, significant improvements in nutrition behaviors at the community level have been documented by *GAIN* members after implementing interventions that were enhanced by *GAIN* training efforts and technical up-dates.

5. Nutrition Policy Analysis & Advocacy Using *Profiles*

LINKAGES-AED has realized the value of creating an enabling environment for nutrition at the national level within government policy and planning circles, as well as within the donor community. In order to establish this enabling environment, the importance of nutrition for human and national development needs to be advocated. In addition, it is important to have a common view of its causes and possible solutions as such consensus facilitates planning for common strategies and harmonized approaches, and leads to better coordination and synergy of intervention efforts.

The central advocacy approach used by LINKAGES-AED to achieve this objective was that of *Profiles*, a process for nutrition policy analysis and communication that uses national and international epidemiological data to quantify the functional consequences of malnutrition on survival, health, intellectual development, and the economy. LINKAGES-AED worked with the Measure Communication Project to train selected professionals from the government, NGO and donor community in *Profiles*. During a two-week *Profiles* workshop, participants used national and international data to estimate the consequences of malnutrition over a ten-year period (2000-2010) on the three key sectors for the development of Madagascar: health, education, and economic growth. During the *Profiles* workshops, participants collected, reviewed, and analyzed national or regional nutrition data and prepared advocacy presentations for various audiences on the consequences of malnutrition.

Four *Profiles* presentations are available on PowerPoint, one national, one for the province of Antananarivo, and one for the province of Fianarantsoa. Another *Profiles* presentation focuses solely on the benefits of breastfeeding.



Profiles Estimates of the Consequences of Malnutrition in Madagascar

Consequences on survival. The *Profiles* analysis shows that 14 percent of infant deaths in Madagascar are attributable to sub-optimal breastfeeding practices. This means that if breastfeeding practices do not improve, some 114,000 Malagasy infants will die between the years 2000 to 2010. This represents four times the current number of infants in the city of Antananarivo. The *Profiles* analysis also reveals that 54 percent of child deaths are attributable to protein-energy malnutrition, the main cause of child mortality in Madagascar.

Consequences on education. The negative effects of iron deficiency anemia on cognitive development are particularly deleterious in infants and young children. In Madagascar, 67% of school-age children are anemic.

Consequences on economic development. The present value of economic losses due to nutritional deficiencies in Madagascar between now and the year 2010 is:

- US \$440 million due to sub-optimal breastfeeding practices
- US \$55 million due to iodine deficiency
- US \$255 million due to stunting
- US \$120 million due to iron deficiency anemia

This is a total loss of US \$870 million, and only for the four nutritional problems considered here.

To date, Profiles PowerPoint presentations

- have been given to more than 1,400 legislators, government officials, health professionals, journalists, and NGO partners; and
- are now available on videotape so that partners can play the national Profiles presentation for advocacy and training purposes. More than 60 *Profiles* video tapes have been distributed throughout the country.

6. Implementing ENA through Behavior Change Communication

The community-focused behavior change strategy promoted by LINKAGES-AED aims to improve the nutrition of infants, young children, and women through the adoption of new practices or the improvement of existing ones. The overall objective is to create new community norms for infant feeding. LINKAGES-AED uses various communication channels, interpersonal communication, community mobilization, and mass media to promote improved breastfeeding and complementary feeding practices. Harmonization of messages from the national to the community level and saturation of these messages has resulted in repeated delivery of consistent messages to the primary target group of mothers and child caretakers through multiple channels. The types of communication channels used in the community strategy of LINKAGES-AED and JSI included:

Interpersonal communication. Home visits, counseling at health facilities, and informal encounters provide opportunities for health workers and community volunteers to negotiate with mothers to try out a new feeding practice and to support them in their efforts to adopt and maintain this practice.

Group discussions. Women's and other community groups offer a venue for promotion and support of optimal feeding practices. Members often provide each other support for feeding decisions and practical solutions to common problems.

Educational talks. Health promoters, including members of women's groups, share information with mothers attending health centers.

Community events. Community events, such as village theater and festivals, are effective avenues for celebrating accomplishments, sharing information, and launching new activities.



Elements of Behavior Change Communication

The behavior change communication process used by LINKAGES-AED in its program with JSI and other field partners is outlined below.

Identification of primary target audiences and development of messages and materials

- Mothers and child caretakers were the primary target audience (other family members, community members, and health workers were the secondary target audience)
- Design communication strategies and messages on formative research to identify obstacles facing mothers which prevent optimal feeding practices (NB: BASICS I conducted formative research and developed IEC materials, enabling LINKAGES-AED to move directly into field implementation)
- Narrow the focus to 2-3 priority messages promoting "small do-able actions" that make a difference

Launching of the program in the 23 districts

- District level : sensitize district officials and carry out selection of NGOs and communities (1/2 day)
- Community level: with district health staff, enlist the participation of community leaders (1/2 day)

Training for health workers, community volunteers, and members of women's groups

- 2-3 days practical skills based training, carried out in three ENA training modules over a period of time (4-6 months spacing between the three different training modules)
- Emphasis of training is on counselling and negotiation skills so as to better support mothers to improve infant feeding practices

Target groups for training

- Community volunteers as they form a vital link with health facilities
- Members of women's groups (nutrition volunteers) who receive training in breastfeeding and ENA
- Health workers at basic health facilities and district hospitals
- Fathers and grandmothers
- Radio announcers
- Journalists

Channels for reaching target audiences with key messages

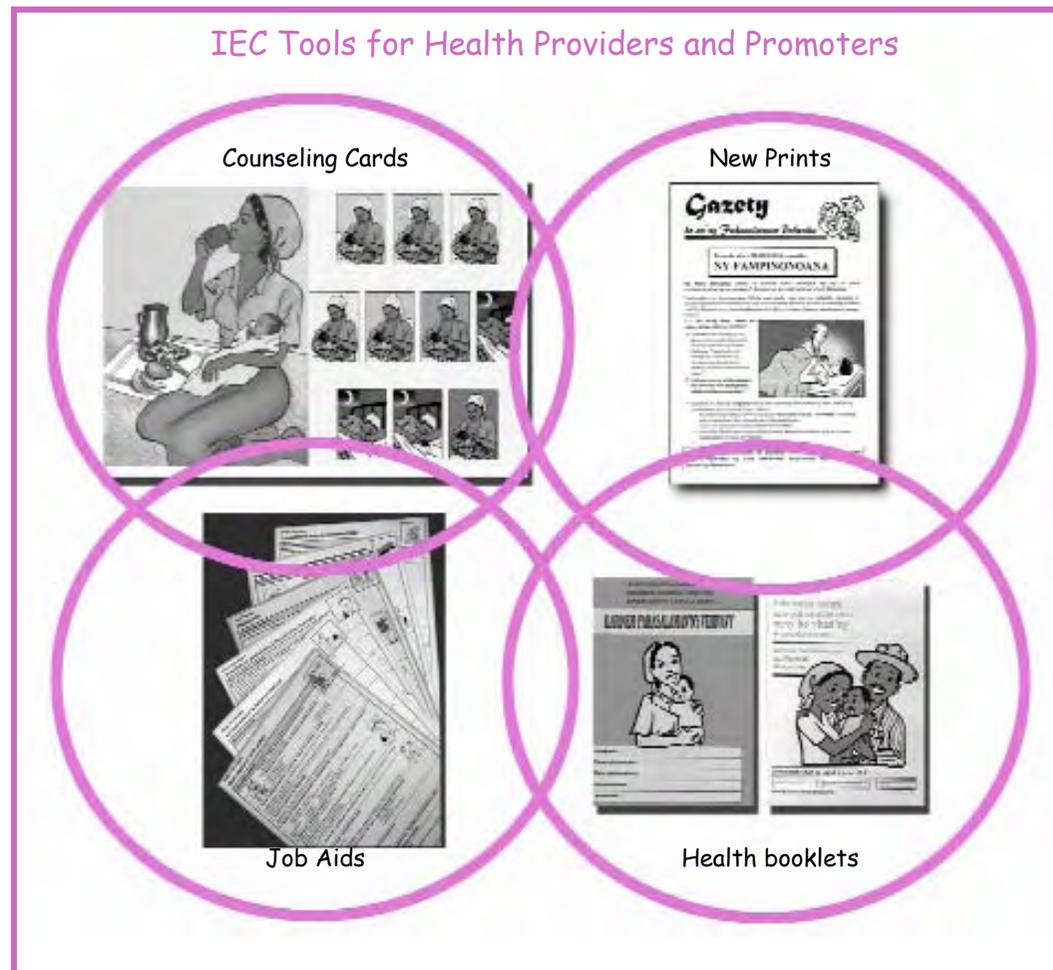
- Interpersonal communication : health worker to mother and mother to mother
- Community mobilization : skits, theater, group counseling
- Village festivals : 'celebrating success'
- Mass media : local radio and print materials

Negotiating with Mothers for Improved Behaviors

The technique of "negotiation" forms the foundation for promoting optimal infant feeding practices through identification of areas of sub-optimal practices, identification of resources within the home, discussion with the mother of what is feasible for her, and the mother's agreement to try an improved practice that she says she can do. This process replaces the more conventional approach of simply dispensing advice.

Tools for health providers and promoters to promote key messages. (See Annex 6 for a list of printed IEC materials used by LINKAGES-AED.)

- "Gazety" (a low-cost newsletter in Malagasy for community volunteers and health care providers) on topics such as breastfeeding and LAM, complementary feeding, breast milk expression and storage, and solutions to breastfeeding problems
- Counseling cards on key ENA practices (breastfeeding, complementary feeding, feeding of the sick child...)
- ENA Job Aids for use by health service providers at the six contact points
- Child Health booklet and Women's Health booklet



7. Using the Mass Media to Promote ENA

Using a music celebrity to promote breastfeeding and nutrition

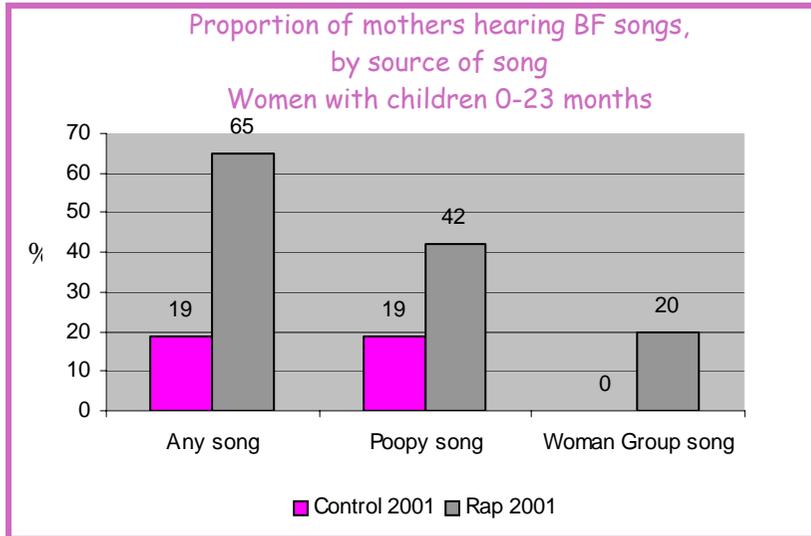
LINKAGES-AED focused its mass media strategy on a well known Malagasy pop singer, known as 'Poopy', who agreed to write and sing songs related to infant and young child feeding, as well as women's nutrition. The idea to bring Poopy on board in this role was that she was a young mother with a new baby, and was committed to breastfeeding her infant and encouraging others to do the same for their babies. As she represented the ideal Malagasy woman -- married with two children -- Poopy was a perfect role model to promote. She was committed to help the women and children in the country by bringing these nutrition messages to life through song and music. The intent was to make other women ask themselves "If Poopy can breastfeed, why can't I?". Poopy's concerts, music tapes and CDs, are very popular in the country. This guaranteed coverage would be wide and reach new mothers, young women and teenage girls, all important target groups. From 2000 to 2004, over 250,000 people attended 50 of her concerts. In addition to promoting her messages through songs, during concerts Poopy takes time to talk to her audience about key breastfeeding and nutrition messages. During her stage performances, large banners promoting these messages are prominently displayed as a stage backdrop to her music band.

Poopy has also undertaken other special events to advocate for women's and child nutrition. Numerous press conferences have been held with her including interviews with journalists, and she has been featured on a number of television shows. Poopy also frequently serves as the guest of honor at local community festivals to promote nutrition causes and was central in a number of major activities for the World Breastfeeding Week.



Following on from her popular song "Porofom-pitiavana" which features exclusive breastfeeding, Poopy wrote two more songs on breastfeeding, one song on complementary feeding, and one song on women's nutrition. After a press conference in late 2000, Poopy was named the country's Breastfeeding Ambassador, and later became the Ambassador of the Essential Nutrition Actions. In addition, to her work supporting nutrition causes, Poopy has also supported causes in family planning and child survival by participating in a LAM mass media campaign as well as the country's immunization program.

A field assessment carried out by LINKAGES-AED in 2001 in program sites with JSI showed that 42% of mothers with children under two years had heard at least one of Poopy's songs on breastfeeding. Of the mothers with infant under 6 months who heard her song, 83% practiced exclusive breastfeeding. Of mothers who had not heard her song, only 70% practice exclusive breastfeeding.



Awards given to Poopy...

- 1993 : Best singer of the year
- 1994 : Best artist of the year (artist, songs, clips)
- 2001 : Best artist & best concert
- 2002 : Best singer of the year

Positive spill-over effects from Poopy...

- Articles on Poopy features in local newspapers
- Poopy's photo and words of 'Porofom-pitiavana' featured on school children's composition workbook

Printed materials with Poopy as advocate...

- Invitation card for Family Planning
- Messages endorsed by Poopy in local newspapers
- Breastfeeding and ENA poster featuring Poopy

Five songs on breastfeeding and ENA have been written and produced

- **3 songs on breastfeeding**
 - Porofom-pitiavana :**
Song included in two commercial CDs, (Tena Namana 2001, Live 2003) and on video clip
 - Nono & Ry reny Malagasy :**
Both songs available in one commercial CD (Live 2003)
- **Songs have been broadcasted on more than 50 radios stations**
- **The 'Porofom-pitiavana' video clip has been shown on all TV stations & a mobile social-marketing program**
- **1 song on complementary feeding**
 - Zandry :**
Song included in two commercial CDs (Mifameno 2003, Live 2003)
- **1 song on women's nutrition**
 - Neny :**
Song available in one commercial CD (Live 2003)

Using radio, TV, journalists, and drivers of public transport to pass ENA messages

LINKAGES-AED explored many ways in which the mass media could be actively involved as partners to promote breastfeeding and ENA. As the program developed over time, different types of mass media channels were brought into the strategy. Journalists were invited to receive technical ENA updates as well as were invited to attend GAIN workshops and selected events such as certification of a baby friendly hospitals, as well as to cover events during World Breastfeeding Week. This resulted in extensive and free coverage of breastfeeding and ENA topics as newspaper articles were regularly published in local papers.

Local radio announcers were also included in trainings to improve their capability to talk about ENA, child survival, and reproductive health issues during their broadcasts. Nineteen trainings on ENA were conducted for 54

radio stations. In addition a series of radio and TV spots were produced on breastfeeding, complementary feeding, women's nutrition, vitamin A, the Baby Friendly Hospital Initiative, Lactational Amenorrhea, and nutrition during emergencies.

Even the drivers of public transport vehicles were involved in the urban component of the mass media strategy as audio music tapes containing key messages were distributed to them. In the provinces of Antananarivo, Fianarantsoa, Mahajanga, and Tulear, a total of 1,400 drivers of taxis and buses were provided with tapes. Out of these, 1,100 were operating in Antananarivo city. One side of the tape promoted breastfeeding and complementary feeding, while the other side promoted family planning and immunization.

Eleven mass campaigns to promote breastfeeding, complementary feeding and LAM were carried out from 2001 to 2004.

- Mass campaigns were organized every three months with national and private radio and TV stations in five provinces (Antananarivo, Fianarantsoa, and from 2002 Toamasina, Mahajanga, and Tulear were added)
- During each campaign, 6 to 10 radio-spots were broadcast each day during one month. In total, more than 33,000 broadcasts were done over more than 20 radio stations.
- During each campaign, 1 to 2 TV spots were broadcast each day during one month. In total, more than 2,500 broadcasts were done over 9 TV stations.

8. ENA Capacity Building: Pre-Service Training

As part of its capacity building strategy, LINKAGES-AED focused on pre-service training in addition to in-service training. A grant from the Japanese government was also received to co-fund this work. All pre-service training schools in the country were involved, with this including the two medical schools and seven nursing and midwifery schools, including one private. This was to ensure that future health care providers in Madagascar would be knowledgeable about breastfeeding and the other Essential Nutrition Actions (ENA). Revised curricula enhanced with the state-of-the-art knowledge in breastfeeding and ENA were introduced in late 2001. This curricula enhancement took place in tandem with the incorporation of IMCI (Integrated Management of Childhood Illness) into the pre-service curricula of these same schools. The IMCI work was undertaken in collaboration with JSI and WHO. Professors and instructors were trained on breastfeeding and ENA in each school. In addition, to track the progress made in incorporating this new knowledge into the lessons plans and practicum sessions of the students, a monitoring system was also designed and put into place.



First step: 2000

- Advocacy for ENA with professors and instructors using Profiles
- Advocacy for IMCI with professors and instructors
- Meetings with the Review Committee of the medical schools
- Visits to hospitals where practicum sessions for students are carried out
- Training in IMCI for instructors in medical and nursing and midwifery schools
- Up-date of existing content with current national health policies and guidelines
- Development of lessons plans for ENA in nursing and midwifery schools, including theoretical and practicum sessions

Second step: 2001

- Integration of IMCI and ENA for the medical schools
- Consensus reached on content
- Consensus reached on layout for lessons plans
- Development of lessons plans for ENA in medical schools, including theoretical and practicum sessions

Third step: 2002-2004

- Implementation of lessons plans
- Training of professors and instructors
- Improvement of practicum sessions for students
- Development of a community ENA-IMCI module
- Development of a monitoring plan, including timetable and checklist
- Implementation of the monitoring plan

As of 2004...

131 medical doctors and 136 nurses, teachers & instructors were trained on ENA

Strategic Steps for Pre-service Training in Madagascar

- Emeritus Professors of Pediatrics from the medical schools engaged as consultants and advocated on curriculum form with Dean, chairs of other departments, professors and teachers
- Dean of medical school used IMCI and ENA as test programs for overall curriculum revision
- Series of orientations continued to expand participation to other faculty members
- Inter-disciplinary workshops created new communication channels and resulted in faculty-wide ownership
- Combined training of teachers with health workers from practicum sites
- Alliance formed among partners, ministries and donors
- VIPP methodology proved ideal for strategic planning sessions

Support from the Japanese Government...

- A grant from the Japanese Government (2001-2002) enabled each medical, nursing and midwifery school to receive:
 - an overhead projector, TV, VCR, etc.
 - up-to-date reference documents on ENA and IMCI
- The grant also funded the establishment of a library for teachers in Antananarivo medical school.

9. Strengthening Health Facilities: The Baby Friendly Hospital Initiative

Baby Friendly Hospital Initiative

Following the Innocenti Declaration and the World Summit for Children in 1990, the Government of Madagascar adopted in 1992 a national policy to support the Baby Friendly Hospital Initiative (BFHI). Madagascar also adopted the International Code of Marketing of Breastfeeding Substitutes that prohibits the advertising and promotion of breast milk substitutes, and dictates rules to guide their distribution and sales.

By 1999, with the support of UNICEF, 54 hospitals and maternities in Madagascar had been certified as Baby Friendly and received their Baby Friendly label. In order to strengthen the country's overall BFHI strategy, the Nutrition Division of the Ministry of Health worked with LINKAGES-AED to redefine the overall strategy, particularly what could be done to help these facilities maintain their Baby Friendly status over time. A three-day workshop was carried out under the GAIN in June 1999 to redefine the BFHI strategy, which included identifying main constraints as well as possible solutions.

The final approach adopted in 2002 as the new national BFHI strategy included :

(1) Support to training health staff working at Baby Friendly facilities with:

- Four "self-learning training modules" to be supplied to Baby Friendly hospitals for each of their health personnel
- Monthly meetings with health personnel to review training guidelines and undertake practical sessions

(2) Strengthen IEC needs by providing:

- Counseling cards on breastfeeding to health personnel for use during counseling and negotiation with mothers
- A newsletter on breastfeeding (Gazety) to each mother after delivery

Self-learning BFHI training modules

Module 1: Advocacy

- Nutrition in Madagascar : Profiles
- Advantages of Breastfeeding
- Code of Marketing of Breastmilk Substitutes
- BFHI

Module 2: Breastfeeding Messages & Practices

- Optimal Breastfeeding Practices
- Initiation of Breastfeeding
- Exclusive Breastfeeding
- Proper Positioning

Module 3: Counseling Proper Attachment

- Methods for Counseling Mothers
- Use of IEC Materials
- Negotiating with Mothers

Module 4: Breastfeeding Problems & their Solutions

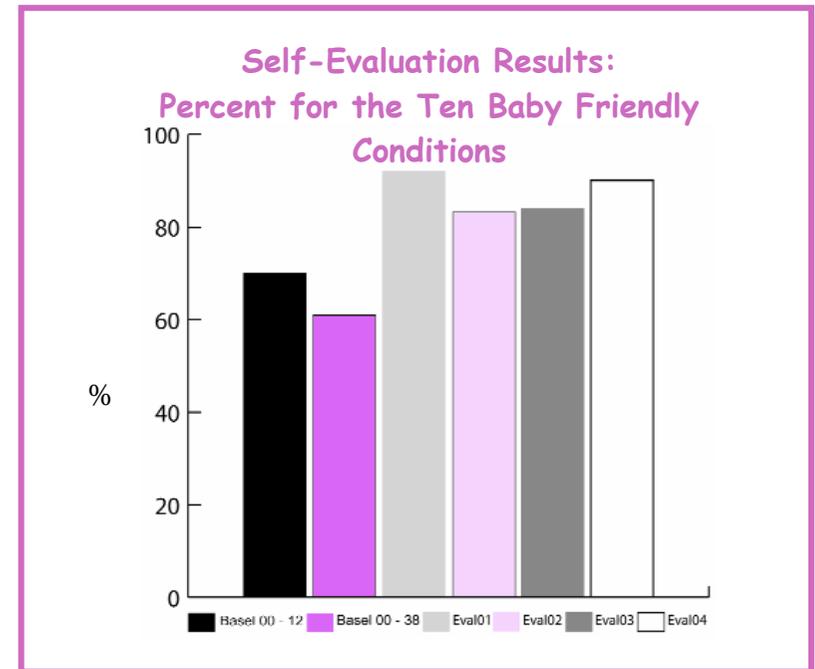
- Problems related to the breasts
- Problems related to the child
- Problems related to the mother

- Copies, for purchase by families, of the Child Health Card and the Women's Health Card, both of which are distributed on a cost-recovery basis in health facilities throughout the country
 - Two advertisement boards promoting breastfeeding and the BFHI to be displayed at the entrance of the hospitals and maternities
- (3) **The addition of post-partum maternal supplementation of vitamin A under Condition Number Six to comply with the ENA concept adopted in Madagascar.**
- (4) **Support to monitoring and evaluation of Baby Friendly conditions with the:**
- Development of a self-evaluation guide, adapted from WHO-UNICEF-Wellstart materials
 - Creation of a committee in each Baby Friendly facility to be in charge of implementing the self-evaluation twice a year



LINKAGES-AED, working in collaboration with JSI, assisted the Ministry of Health to implement the new strategy in selected facilities of their focus districts. Eleven hospitals, representing 25,000 deliveries, among them the three largest hospitals in the capital city Antananarivo received support from Linkages-AED.

In late 2000, the Ministry of Health, with the support of UNICEF, started to carry out the self-evaluation in 38 hospitals already certified as Baby Friendly. The results of the self-evaluation showed that only 61% of these facilities still fulfilled all Ten Baby Friendly Conditions. The results of the self-evaluation were also tracked in 12 Baby Friendly facilities that implemented the new strategy. At the time of the first self-evaluation in the year 2000, 70% had fulfilled all Ten Steps, with this steadily improving to levels of 92% and 83%, by 2001 and 2002 respectively. In 2003, the level of fulfilment was 84% in the 20 Baby Friendly facilities found in the LINKAGES/JSI focus districts. By 2004, the level of fulfilment in 10 of these same facilities was 90%.



In 2004, there are 67 Baby Friendly Hospitals and 3 Baby Friendly Health Facilities

Drawing from experiences with the Baby Friendly Hospital Initiative, LINKAGES-AED worked with the Nutrition Division of the Ministry of Health to develop lactation room at workplaces, particularly at the large textile factories established in Madagascar as part of the economic export expansion. Many of the employees of these factories are women, thus it was hoped that new mothers would be able to bring their babies to the workplace and continue optimal breastfeeding. Experiences with similar initiatives elsewhere in the world have shown reduced absenteeism and accidents involving new mothers in the workplace.

In Madagascar, the initial analysis of this strategy showed that potentially 100,000 women could be reached at 120 factories. However, due to the political crisis which affected the country in late 2001, many factories closed down and support to introducing the Baby Friendly Workplace program was temporarily halted with activities resuming in late 2002.

Results to date with Baby Friendly Workplace Initiative

- Training modules were developed to increase the understanding of employers on the importance and benefits of optimal breastfeeding and complementary feeding practices for both the employer and the employee
- 8 advocacy meetings were conducted for owners and managers in 20 factories
- By 2004, there were 8 Baby Friendly Workplaces

The Baby-friendly Workplace of Axelle: A Model Worth Following

It is 10.10 a. m., in the small room away from the factory. Eight working women are sitting on wooden stools with their babies aged three to nine months at their breast. Toys are scattered on the floor around them. Cradles made of local materials are aligned against the wall. The room is clean and brightened by the sun.

Alice, a supervisor trained in breastfeeding, is among the first to have used this facility. She explains: "We have received the BFWP medal since Jan. 20, 2002. On average, 80% of women with babies use the lactation room. (They take) 20 minute breaks... three times every day. This arrangement has many benefits to the mother and the child. Children are heavy and healthy. The mothers are relaxed and calm, because they are not worried about their children sleeping in a closed place under inadequate supervision."

"For the company, there are also important benefits," says Francis Malaro, the company director, who has about 500 employees, 95% of whom are women. "This unit brings a greater human face to the work place and it requires a minimal investment for substantial returns. Because the women are relaxed, they are more productive. In addition, the three 20-minute breaks have far less negative impact on the production than the whole one hour taken at once, when the workers leave earlier."

(quoted from page 31 in BASICS II /JSI/ LINKAGES/ Advance Africa Report on "Improving Family Health Using an Integrated Community-based Approach: Madagascar Case Study", 2004)

10. ENA Capacity Building: In-service Training

Overview of the Training Process

LINKAGES-AED and JSI worked closely with the District Level Management Teams (EMAD) under the supervision of the Provincial Medical Director, to support health facilities and communities in the 23 target districts. Before initiating program activities, LINKAGES-AED and JSI field staff received training in ENA, child survival, and reproductive health. They learned how to engage the target audience through trials of improved practices, negotiation of new practices with mothers, and using the technique of storytelling. One of their primary activities was to build the capacity of health workers, community group leaders, and nutrition volunteers in interpersonal communication skills. Capacity building in community mobilization was also given priority.

Activities at the community level were catalyzed by LINKAGES-AED and JSI field agents organizing trainings for health workers, members of the Community Health Action Committees (CASC), community volunteers, as well as members of women's groups. In the early phase of the program, skills based training was also given to community leaders and community volunteers on techniques for community mobilization around issues of nutrition, child survival, and family planning.

LINKAGES-AED specifically supported training in ENA and BCC to improve the capacity of health care providers and nutrition volunteers to assist women to adopt practices to improve their children's nutrition and that of their own. A list of the training modules developed and used by LINKAGES-AED is given in Annex 7.

In regard to ENA, the training modules included both technical information on nutrition as well as training in the use of different IEC materials, including counseling cards on breastfeeding and appropriate feeding of young children, the local newsletter (*Gazety*), as well as the Child Health card and Women's Health card.

The ENA training for health workers and community members was divided into three modules, taught four to six months apart, as follows:

- **Module I:** breastfeeding and LAM (2 days),
- **Module II:** complementary feeding to breastfeeding and feeding of the sick child (2 days),
- **Module III:** women's nutrition and micronutrients (1 day)

Two versions of the three ENA modules were developed, one targeted at health workers, staff of NGOs, and members of the GAIN, as well as a simplified version targeted at community members, especially members of women's groups. In addition, members of women's groups who participated in ENA training were also subsequently visited by LINKAGES-AED field agents for a 1 day follow-up supervision session to emphasize key messages and skills.

At the end of each of the three ENA training modules, a special session was included to enhance skills in counseling and negotiation. This reinforced the behavior change strategy, especially the counseling techniques to inform caretakers about small 'do-able' actions to improve nutritional practices, as well as the negotiation techniques based upon dialogue with mothers and caretakers that allow them to identify and resolve their problems.

Who was trained and how many?

One aim of the program in Madagascar was to train as many individuals as possible in practical skills needed to successfully promote improved ENA, child survival and family planning practices within families. Trainings were short term, highly skills-based, and focused on key messages, small do-able actions, and the use of IEC materials. The following groups received training by LINKAGES-AED and JSI.

MOH Service Providers. Health providers working at basic health facilities received training on all aspects of ENA spread over the three modular training courses. In the case of health workers, training in the three ENA modules was spread out on a monthly basis. The training also provided the opportunity to explain the use of the Nutrition Jobs Aids which serve as printed guidelines to remind health staff of the key ENA messages that need to be promoted at each of the six life cycle contact points. To comply with the MOH training policy, over time LINKAGES developed two self-learning ENA training modules covering these same topics contained in the original three ENA modules. In 2004, 500 copies of these self-learning modules were printed and distributed to the LINKAGES-AED target provinces and districts.

Target Group	Focus of training	Number of days
Community Leaders	Community mobilization	2 days
Community Volunteers	Community mobilization	2 days
Training of Trainers for NGOs & Community Trainers	Community mobilization	3 days
Refresher Training for NGOs & Community Trainers	Community mobilization	2 days, 6 months later
Members of Women's Groups	ENA	5 days in 3 modules spaced every 4-6 months
Members of Women's Groups	Follow-up supervision session on ENA	1 day
Members of Women's Groups and other community members	ENA, EPI & family planning	1 day refresher (Revitalization Training)
Health Workers	ENA, child survival & family planning	1.5 to 2 days every month
NGO Staff and GAIN Members	ENA	5 days in 3 modules spaced every 4-6 months
BFHI staff	ENA	3 hours every month
ENA for Pre-Service Instructors	ENA	5 days
Private doctors	ENA	1 day

Community Community Members. Working together, LINKAGES-AED and JSI introduced integrated health education into existing grassroots groups by training community health promoters and community-level trainers (members of the community) on technical topics, counseling and negotiation techniques, and the use of IEC materials such as counseling cards and the child and women's health cards. Local leaders, local NGOs, and community volunteers received short "hands-on" training on nutrition, child survival, and reproductive health. The training focused on promoting key behaviors, based on 'small do-able actions', that are encouraged through community mobilization, village theater, songs, as well as one-on-one counseling.

Nutrition Volunteers and Members of Women's Groups. Specific training was given to nutrition volunteers, the majority of whom were members of existing Women's Groups, on the Essential Nutrition Actions. The training focused on technical skills, techniques of counseling and negotiation, as well as the organization of community support groups. Some of the Women's Groups with whom LINKAGES-AED worked were affiliated with income-generating, health and nutrition, or social activities and others with religious organizations.

NGO Staff. LINKAGES-AED also trained staff from local Malagasy NGOs and from international NGO partners, such as Catholic Relief Services, CARE, and the Adventist Development and Relief Agency.

Private Sector Physicians. Working in collaboration with Population Services International (PSI), LINKAGES-AED also trained private physicians in breastfeeding, LAM, complementary feeding, feeding of the sick child, and women's nutrition. This training also provided the opportunity to explain the Nutrition Jobs Aids, as well as to distribute different volumes of the local health newsletter (*Gazety*) on nutrition and child survival.

Types of people and numbers trained, as of 2004...

Health workers:

- 1,900 in breastfeeding & LAM
- 1,600 in complementary feeding & feeding of the sick child
- 1,100 in women's nutrition & micronutrients

Community health promoters:

- 12,073 in community mobilization

Community-level trainers:

- 252 in community mobilization

Members of Women's Groups:

- 4,376 in breastfeeding and LAM
- 2,324 in complementary feeding and the feeding of the sick child

NGO staff:

- 700 trained in ENA
- 286 trained on 'ENA during Crisis'
- these trained NGO staff then trained 1,500 additional persons in ENA in their project sites

Private physicians:

- 500 trained in ENA

Revitalization Campaign of 2002-2003

The country faced serious political difficulties starting in late 2001 which continued to August 2002. As a result LINKAGES-AED and JSI, along with many other donor groups, suspended field activities. Once the situation improved a decision was made to launch an intensive Revitalization program in the 10 original districts in order to provide refresher training to community members in key topics including nutrition, immunization, and family planning

Over 2002-2003 a total of 4,460 community members benefited from the refresher training

Child-to-Community to pass key messages through Children

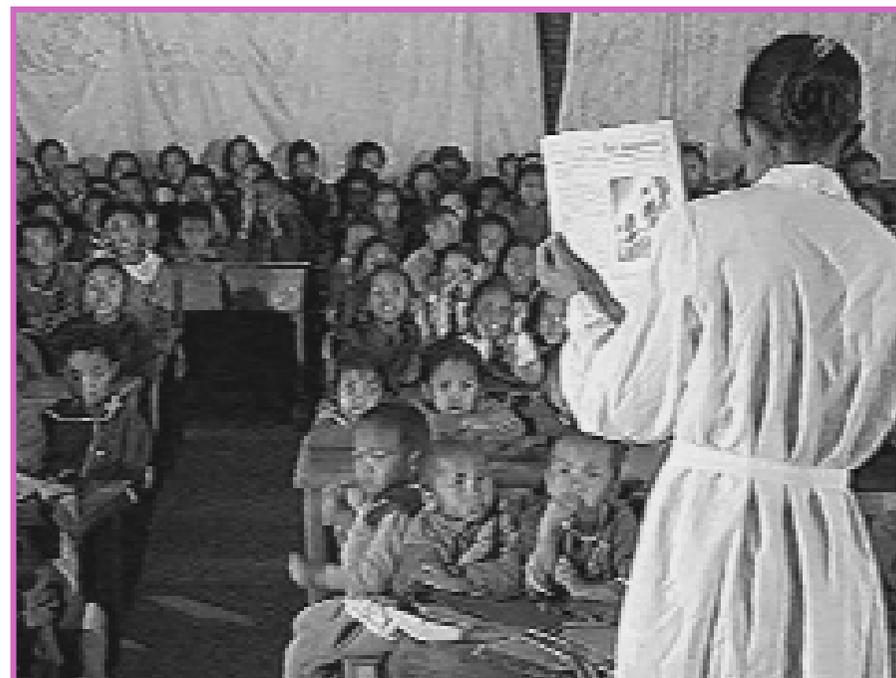
In 1997, a pilot Child-to-Community exercise was initiated by the BASICS I project in 39 primary level schools where children become actors as well as the messengers for their families on health education, particularly hygiene, nutrition, and immunization. In 2000, LINKAGES-AED and JSI extended the Child-to-Community approach to 256 primary schools as well as to selected middle schools in the 23 focus districts.

Currently other partners (World Bank, NGOs, Peace Corps, etc.) are using the same Child-to-Community training module. The module for primary schools is available in Malagasy, French, and English.

Child-to-Community Approach

For each school enrolled, the interventions are:

- School and community mobilization
- Training in hygiene, nutrition and immunization for teachers
- Supply of IEC and teaching materials
- Exchange workshops among teachers
- Refresher training for teachers

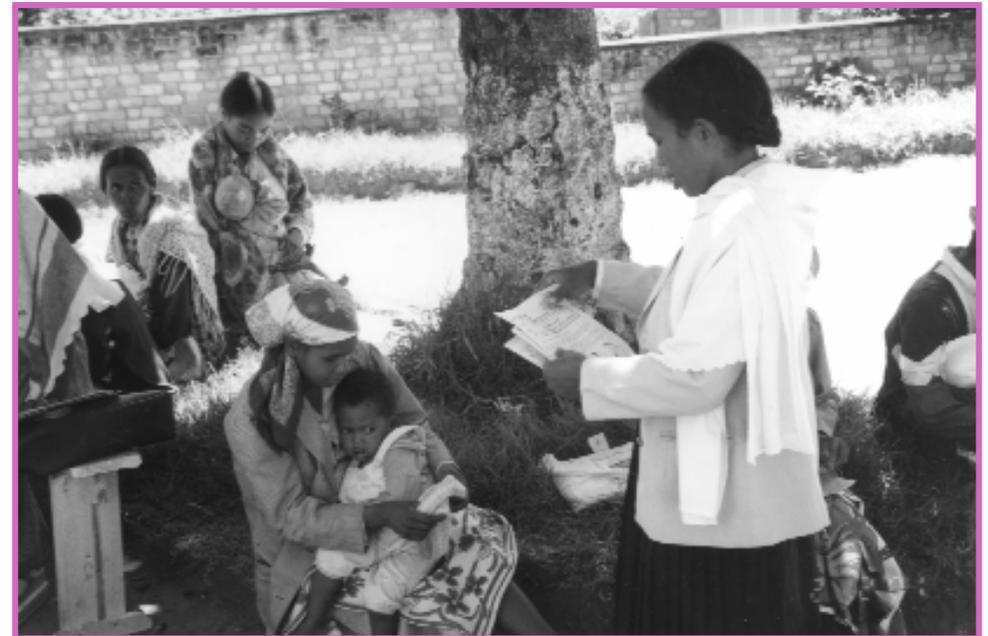


11. Nutrition Volunteers as Agents of Change: Women's Groups

One of the LINKAGES-AED's main strategies to spearhead community nutrition interventions in the 23 districts was the use of community-based volunteers, among them members of Women's Groups, to disseminate nutrition messages. These nutrition volunteers were chosen because they belonged to existing associations or groups and/or are well regarded in their community. The volunteers received training in breastfeeding, in ENA, and in the use of IEC materials. They were expected to conduct various educational activities such as home visits and group discussions at the community health center, participate in national or commune-sponsored health and nutrition events, and promote ENA behaviors in their daily activities and contacts with mothers and pregnant women.

A qualitative assessment was made in August 2002 to better understand how the improvement of infant feeding practices, as measured by LINKAGES-AED's annual RAP surveys, were achieved. Interviews were conducted with volunteers, heads of health centers, and local authorities to explore the role and functions of nutrition volunteers. Specifically, the objectives were to understand the factors that facilitated and hindered the work of volunteers as nutrition promoters and to explore the factors affecting the sustainability of involving volunteers in such a program. It should also be noted that this assessment took place at the end of a lengthy period (late 2001 to August 2002) when few field activities could be undertaken by LINKAGES-AED and JSI due to the political problems which faced the country that necessitated a freeze of all field activities. Thus, the results of this investigation also show how well the work of these volunteers proceeded even without the presence and support of LINKAGES-AED field staff.

The findings of the assessment revealed that despite a number of challenges encountered, volunteers managed to promote nutrition messages via a number of different forums in their community : national vaccination campaigns, health festivals, group discussions at health centers, home visits, informal contacts, community meetings, and activities within their respective associations. In some cases, the volunteers engaged in non-nutrition activities as well.



Women who belonged to a group or association were more likely to be dynamic volunteers than those without a group affiliation. First, these women could easily integrate nutrition messages into the organization's existing activities. Second, they had contact through the health center with a captive and appropriate audience, e.g. pregnant women and mothers of young children. Third, their role as maternal and child health/nutrition animators was already defined and recognized in their communities.

Key characteristics of the members of Women's Groups who were trained and worked as 'nutrition volunteers':

- all were originally from the area where they lived,
- the majority were "middle class," married, and mothers of grown children if not grandchildren,
- the majority had flexible jobs, a commitment to community development, and at least primary school education,
- many of the women could be considered to be sociable individuals, and
- many of the women were between the ages of 30-50 years.

In all sites, the women who were interviewed in the assessment appeared to conduct their nutrition activities more diligently during national events and at association levels. Certain activities within the commune and neighborhood levels tended to be sporadic or diminish over time. All of the women interviewed said that they educated mothers or pregnant women whenever an opportunity presented itself, such as encounters with acquaintances and strangers on the road, at the market, at the local public laundry facility, in the fields, etc.

The study's results also indicated that this community-based volunteer force is indispensable in reinforcing nutrition messages locally. Many mothers consider nutrition volunteers their neighborhood resource for health and nutrition information. In addition, most local authorities rely on volunteers for assistance in various health events.

Although it is recognized that nutrition volunteers need on-going support, local authorities, including the heads of the health centers, had not yet provided the coordination and support as originally envisioned. For nutrition volunteers to do their work well, they need to be consistently supervised, compensated, and respected. These issues have to be addressed when working with women's groups.

Sustaining nutrition volunteers is possible provided there is continued national, and more importantly, local commitment and recognition for their work. Through the life of a project, such as LINKAGES-AED with JSI, positive contributions can be made to encourage community participation and mobilization by involving heads of the health centers and local authorities. Ultimately, however, it is the communities that will have to decide whether they want services provided by trained volunteers and whether they will provide the necessary support and recognition to these volunteers.

Some ideas from the field assessment on how nutrition volunteers can be sustained and supported...

- *A leader among the nutrition volunteers could be identified, and/or another health worker at the health center could be responsible for supervision,*
- *For community recognition and respect, local authorities need to first value women's efforts in order to provide continued public support of nutrition volunteers,*
- *Mass media could be used to acknowledge and appreciate nutrition volunteers,*
- *A national appreciation day for volunteers could be initiated, and*
- *Revenue-generating activities could also be used to compensate nutrition volunteers.*



12. Impact Results

Assessment Methodology

To assess changes in infant and young child feeding practices as well as LAM up-take, LINKAGES-AED conducted rapid assessments at program and control sites in October 2000, October 2001, and October 2002. Comparisons were made with the results of the baseline survey carried out in the program sites of the initial 10 districts by JSI and LINKAGES-AED in early 2000. Data from Antananarivo and Fianarantsoa provinces collected during the 1997 Demographic Health Survey (DHS) were also used for comparison purposes. The LINKAGES-AED program with JSI in Madagascar is one of the first to document improvements in breastfeeding behaviors at such a scale.

The evaluation approach used the 'Rapid Assessment Procedures' (RAP) to collect both qualitative and quantitative data on the effectiveness of district-level behavior change activities on key indicators over the previous year. Information on exclusive breastfeeding was carried out using the same 24 hour recall method employed internationally by the DHS survey program. Similarly, the timely complementary feeding rate for infants was also determined by 24 hour recall.

Each RAP survey was carried out in one program commune of each of the original 10 districts. As the goal of the RAPs was to assess the efficacy of the behavior change strategy, communities to be sampled were selected if there was evidence that the strategy had been successfully embraced in that area. In addition, during each RAP one commune from a control district was also sampled. Over time, the same communes were sampled for each of the RAPs.



1 Rapid Assessment Procedures. Qualitative Methodologies for Planning & Evaluation of Health related programs. Nevin S. Scrimshaw & Gary R. Gleason. International Nutrition Foundation For Developing Countries (INFDC). 1992.

2000 RAP: The 2000 RAP focused on indicators related to exclusive breastfeeding rates, the initiation of breastfeeding within the first hour, knowledge and practice of LAM, maternal nutrition, Vitamin A, and exposure to IEC activities. The quantitative component of the RAP included interviews with 220 mothers of infants 0-5.9 months of age, 20 of whom were from the control site. A qualitative component collected information from mothers on the successes and constraints to change breastfeeding behaviors as related to the program.

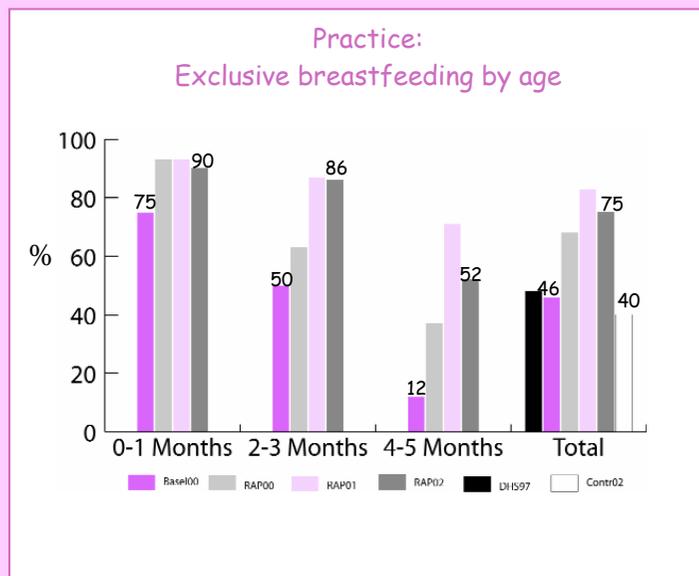
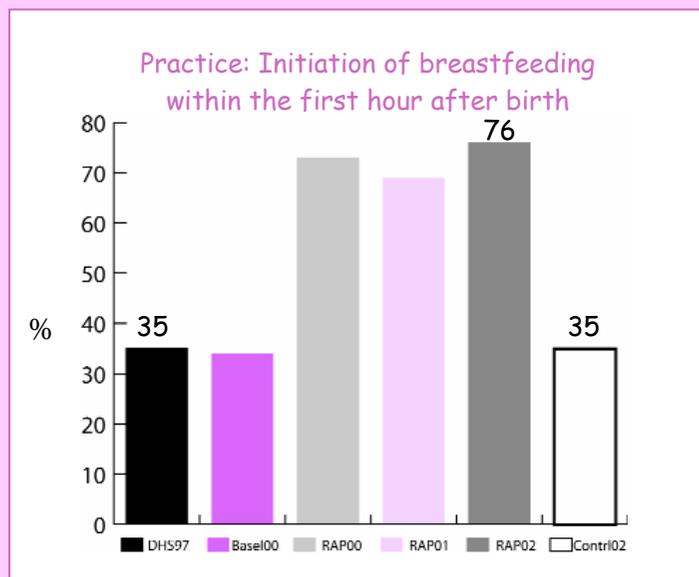
2001 RAP: In addition to the key indicators included in the 2000 RAP discussed above, the 2001 RAP focused on complementary feeding and the feeding of the sick child. The quantitative component included interviews with mothers of children 0-5.9 months, 6-11.9 months, and 12-23.9 months of age. The qualitative information gathered information on the successes and constraints that applied to these two themes in the current program. Also, in addition to sampling from program communities in the 10 original focus districts, an over-sampling was undertaken in the original districts of the BASICS I project to assess the level of impact achieved during a pilot phase as compared to the level of impact achieved during LINKAGES-AED and JSI's scaling-up phase. In total there were 500 structured interviews with mothers of children 0-23.9 months old. The sample breakdown is as follows :

- 180 infants 0-5 months old in the intervention districts and 20 in the control community,
- 90 infants 6-11 months old in the intervention districts and 10 in the control community,
- 180 children 12-23 months old in the intervention districts and 20 in the control community.

2002 RAP: The 2002 RAP focused on the same key indicators as the 2001 RAP, and aimed to assess their levels after an extended period in late 2001 and the first half of 2002 when no LINKAGES-AED/JSI interventions were carried out because of the political crisis in the country. The sample size and its distribution were the same as the 2001 RAP. Qualitative information was also gathered at this time to assess what, if any, supportive activities had been implemented by the communities themselves.

Main Results

The main results of LINKAGES-AED program with JSI in Antananarivo and Fianarantsoa provinces demonstrate significant improvements in infant feeding and related ENA practices. Key results are summarized below by the infant feeding and ENA behaviors promoted by the program. Additional results, analysis, and discussion are contained in the various RAP survey reports listed in Annex 8.



Breastfeeding and Diarrhea

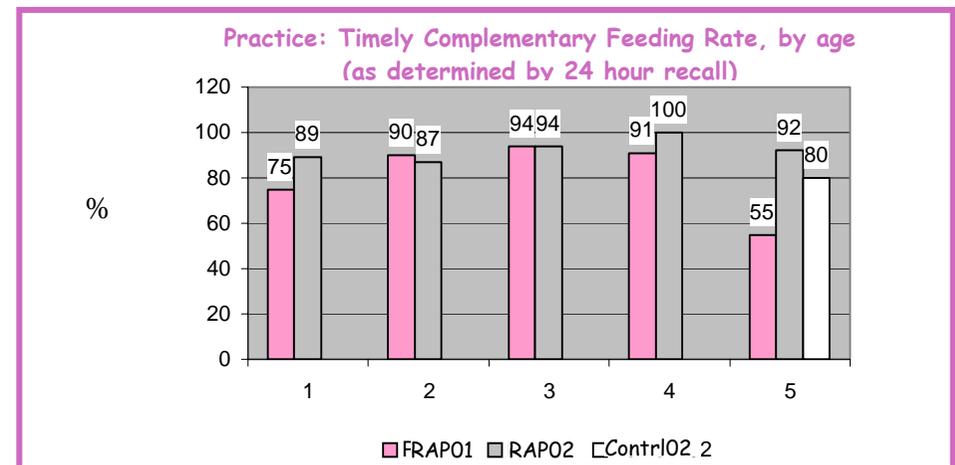
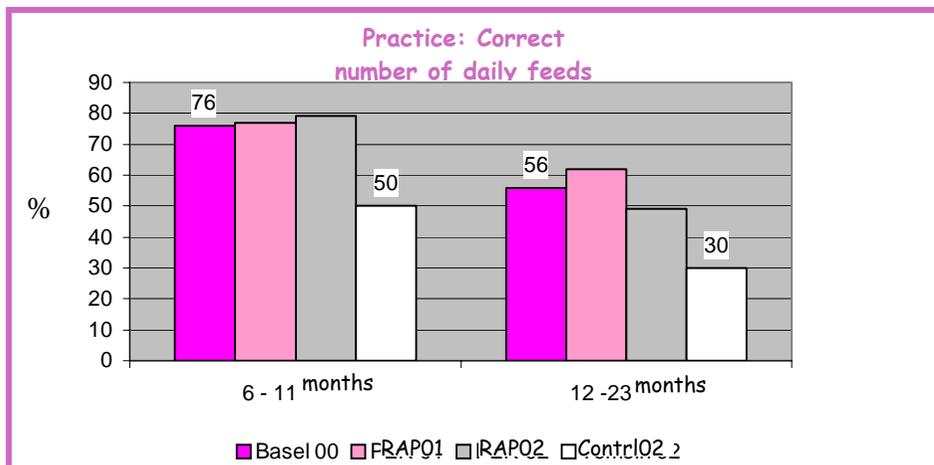
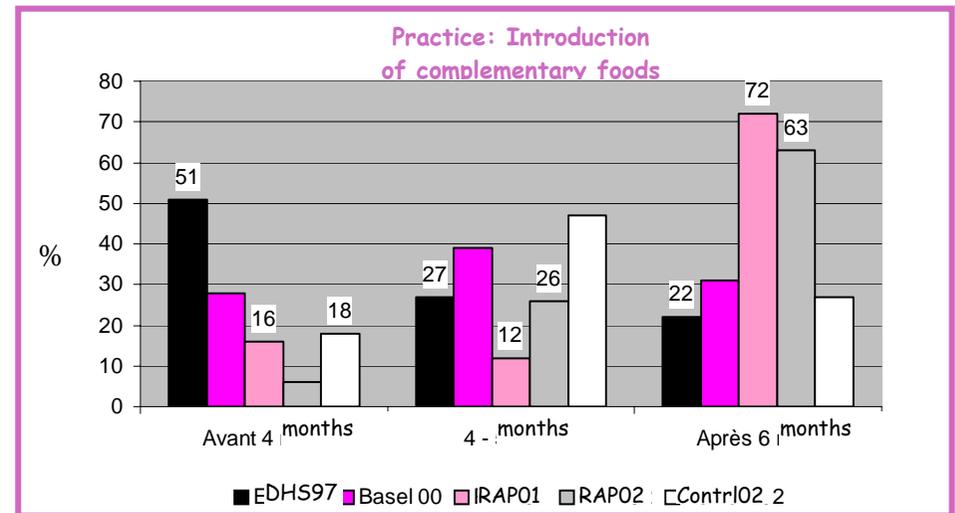
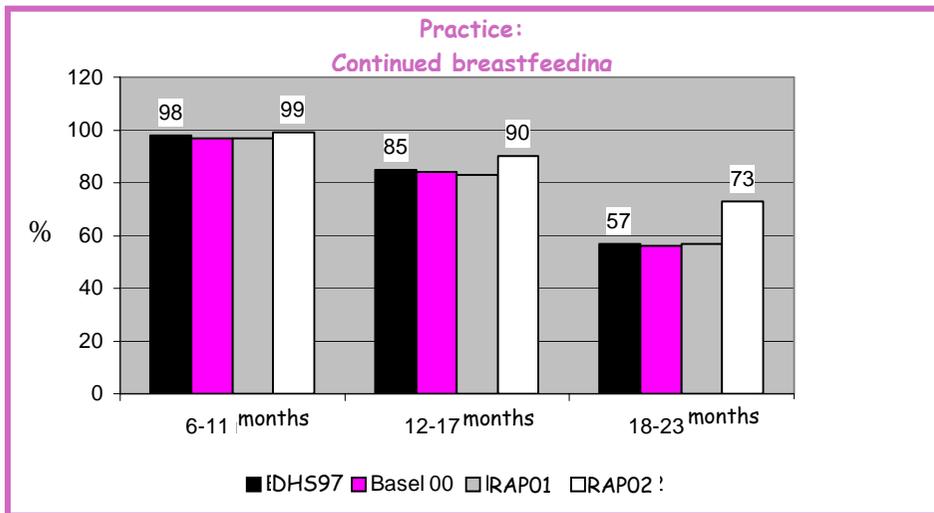
- In 2001 infants who were not exclusively breastfed were 3.75 times more likely to have diarrhea than infants who were exclusively breastfed. (p=0.02, Fisher's Exact Test)
- In 2002 infants who were not exclusively breastfed were 2.74 times more likely to have diarrhea than infants who were exclusively breastfed. (p=0.02, Fisher's Exact Test)

Conclusions

Levels of exclusive breastfeeding rose significantly from a baseline level of 46% to 68% during the 2000 RAP, 83% during the 2001 RAP, and 75% during the 2002 RAP. The greatest increase was seen in infants 4-5.9 months of age.

Levels of timely initiation of breastfeeding also showed significant increases, from 35% at the time of baseline to 76% at the time of the 2002 RAP.

Complementary feeding in addition to breastfeeding from 6-23.9 months



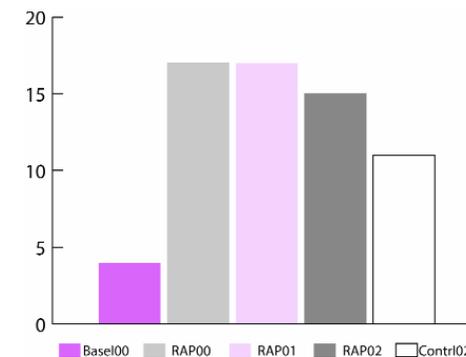
Conclusions

Some of the practices on complementary feeding have significantly improved such as reducing early introduction of complementary foods before 6 months. However, the practices of breastfeeding until two years and the frequency of feedings are still too low even if the latter had improved. No data were collected on the density and variety of the complementary foods given.

Conclusions

Regarding feeding during and after illness, improvement is only seen in the frequency of breastfeeding during illness, which rose from a baseline level of 4% to about 15-17% in subsequent RAPs.

Practice: Breastfeeding during illness (infant 0-5.9 months)

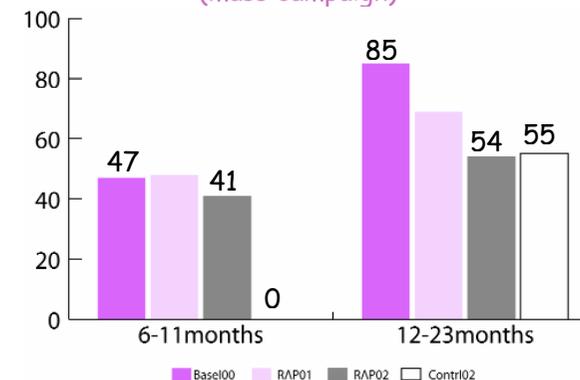


Vitamin A supplementation for children

National Vitamin A Supplementation Program

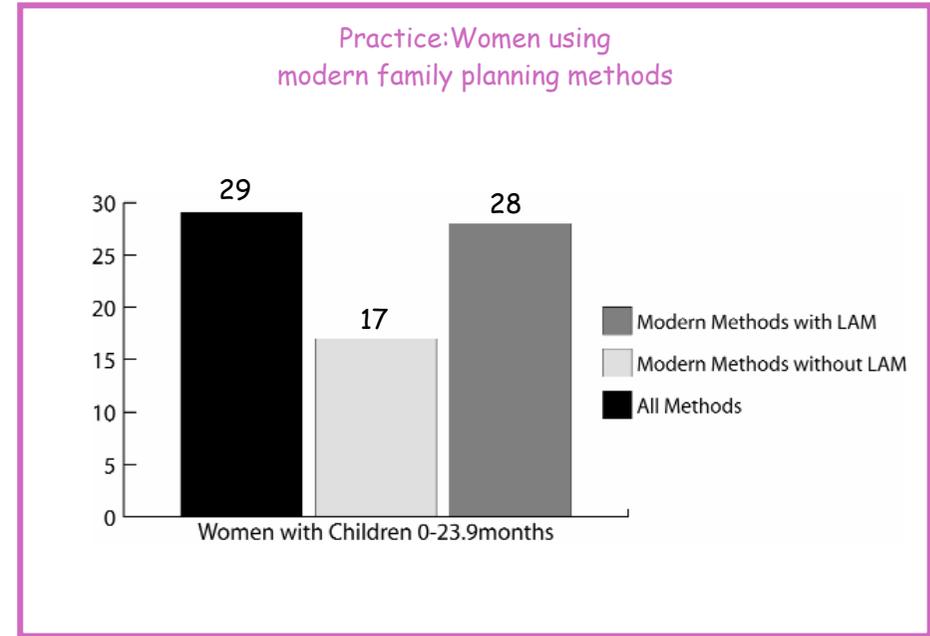
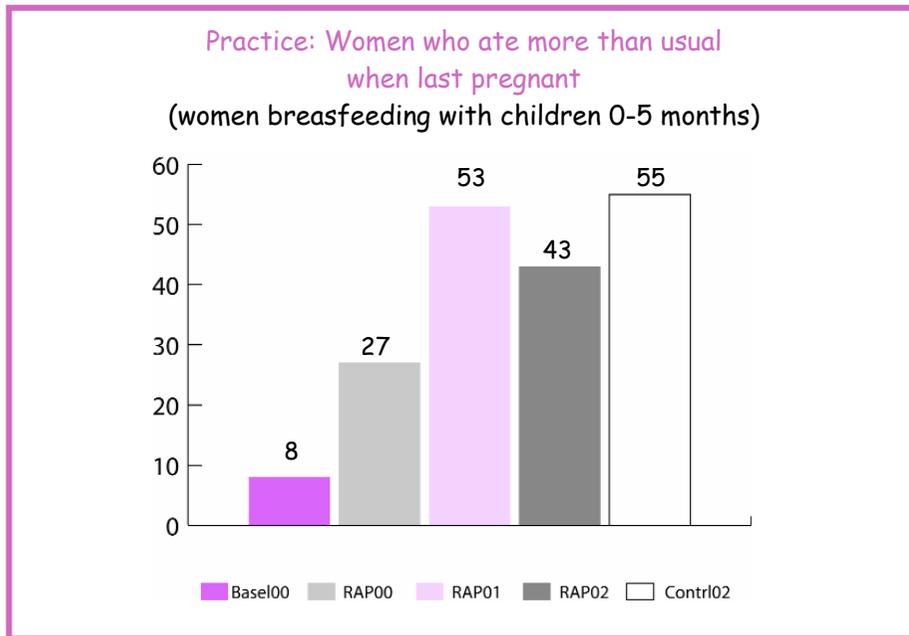
- 1996 - No national protocol on vitamin A
- 1998 - Validation of protocol (GAIN)
- 1998 - Supplementation on a routine basis only
- 2000 baseline - Coverage obtained with NID (AVA)
- September 2000 - MOH initiates national vitamin A campaign
- April 2001 - Second national vitamin A campaign
- October 2001 - Routine national vitamin A campaign
- May 2002 - Routine national vitamin A campaign
- October 2002 - Routine national vitamin A campaign

Practice: Vitamin A received in past 6 months (mass campaign)



Conclusions

The results of the Vitamin A supplementation program are encouraging given that the mass campaigns are carried out with limited financial support. The high baseline level in this age group represents the National Immunization Day (AVA) campaign carried out in Madagascar during 2000. LINKAGES-AED supported vitamin A supplementation through its ENA training modules which emphasized the importance of families seeking vitamin A supplementation for their children.



Conclusions

There was an increase in the percentage of women reporting that they ate more during pregnancy, however, there was not much improvement in increasing food intake during breastfeeding, a message promoted by the program.

LINKAGES-AED also promoted post-partum vitamin A supplementation as part of the ENA training given to health workers and community members. The results of the 2002 RAP showed that 50% women reported having received vitamin A supplementation within 8 weeks after delivery as compared to a baseline level of zero.

Conclusions

The uptake of LAM as a contraceptive method significantly increased as a result of its promotion by LINKAGES-AED with JSI in the 23 districts. The 2002 RAP showed that LAM contributed 11 percentage points towards the use of all modern family planning methods. Other data show that the belief in the effectiveness of LAM also increased as well as women's knowledge on the three criteria necessary for the practice of LAM (baby under six months, exclusive breastfeeding, and no menses).

Significant results achieved from a second generation program

Similar to the positive results shown above from the focus districts of the joint LINKAGES-AED and JSI program, major results were also obtained in improved breastfeeding practices in a second generation program initiated over a 10 month period in 2003/2004 in three target districts of two new provinces, Tulear and Mahajanga. These two new provinces, located in the coastal areas of Madagascar, cover a population of 1.4 million people.

The intent of this second generation program was to rapidly roll-out to new areas of the country a streamlined version of the original approach developed in Antananarivo and Fianarantsoa provinces. The table below compares the results of the baseline survey carried out in April/May 2003 and the endline survey carried out in March/April 2004, with the latter including a control district. In both surveys, 540 mothers were selected, 240 with children 0-5.9 months, 90 with children 6-11.9 months, and 210 with children 12 to 23.9 months.

Indicators	Baseline	Endline	Control (endline only)	P value (Baseline to Endline)
Timely initiation of breastfeeding within one hour	29%	58%	31%	<0.001
Exclusive breastfeeding 0-5.9 months	29%	52%	18%	<0.001
Recommended breastfeeding frequency (0-5.9 months)	70%	90%	74%	<0.001
Gave complementary foods before 6 months	70%	52%	65%	<0.001
Vitamin A 8 weeks after delivery (postpartum mothers)	12%	23%	7%	<0.01
Mother eats more than usual during lactation	42%	69%	55%	<0.001
Modern family planning use (mothers of infants 0-5.9 months)	9%	18%	6%	=0.05
Use of LAM (mothers of infants 0-5.9 months)	5%	15%	1%	=0.02
Correct use of LAM (mothers of infants 0-5.9 months)	1%	13%	0%	<0.001
Mothers have heard a message on breastfeeding	38%	69%	19%	<0.001
Mothers have heard a message on complementary feeding	33%	43%	15%	<0.001
Heard Poopy's songs on breastfeeding	25%	44%	12%	<0.001
Health worker as primary source of information on nutrition	29%	69%	55%	<0.001

²The program in Tulear and Mahajanga provinces was co-funded by the Global Forum for Health Research (Child Health and Nutrition Research Initiative Board) through a contribution from the World Bank, and the United States Agency for International Development (USAID) through contributions made to the Academy for Educational Development.

³ Chi-Square results

13. Lessons Learned

What practical lessons can be learned from Madagascar?

There are many lessons that can be distilled from the experience of Madagascar in improving infant feeding practices at large scale in the context of the Essential Nutrition Actions approach.

A number of lessons have practical relevance to planners and program managers in other countries facing similar challenges in dealing with infant, young child and maternal malnutrition. Some of these practical lessons with international relevance are summarized below.

Lesson 1: **Widen the support for nutrition at the national policy level through effective coalition building and advocacy**

- An informal mechanism such as the *GAIN* model can be used to bring together a diverse group of nutrition stakeholders to advocate for nutrition, share technical up-dates, as well as transfer lessons from the field to the national level and vice versa.
- Results of Profiles can be packaged for different target groups to stimulate discussion among government officials, politicians, donors, university staff, journalists, and the general public.
- Include journalists, radio announcers, and other members of the mass media from the beginning to involve them as nutrition advocates who can extend the reach of nutrition messages even farther.

Lesson 2: **Multiple communication channels create a supportive environment at the community level for mothers to adopt improved infant feeding practices and the Essential Nutrition Actions (ENA)**

- Strive to train large numbers of health workers, community members, NGO staff to saturate communities with advocates for infant feeding and ENA.
- Design a training strategy that uses concise, action-oriented and skills-based modules and aims to equip trainees with practical skills and confidence to effectively counsel and support mothers.
- Organize community mobilization events, radio programs, popular songs, to create a positive community environment for mothers to optimally feed their infants and look after their own nutrition



Lesson 3: **Combat malnutrition through an integrated approach such as ENA to avoid vertical stand-alone interventions as well as increase opportunities to extend nutrition support well beyond the traditional base of growth monitoring and promotion**

- Do not compartmentalize nutrition into stand alone vertical programs as this is neither an effective use of resources nor an effective means by which to address the problems of nutrition, most of which are inter-related.
- The ENA approach addresses critical nutrition areas, such as infant feeding, women's nutrition, and micronutrient deficiencies in relation to one another, thereby promoting better program synergy, coordination, and effective use of human resources.
- Do not limit nutrition support to growth monitoring and promotion activities as this contact reaches only a small percentage of the key target groups; rather promote the key behaviors of the ENA approach at all possible contact points in relevant health and non-health programs.

Lesson 4: **Work towards working together and harmonizing approaches**

- Forge partnerships at all levels - between government ministries, donors, local and international NGOs, universities, private sector and mass media - to increase the voice for nutrition and achieve synergy in approaches and resources.
- Using a mechanism such as the *GAIN* - at the national and regional levels - can be used to forge these action-oriented partnerships.

- Facilitation methods, such as VIPP, are helpful for conducting coordination and planning meetings as the process is 'solution-oriented' and highly participatory.
- A top priority should be harmonizing key messages and IEC materials among different partner groups to reinforce the desired behavior change at the level of the mother and family.

Lesson 5: **Promote 'small do-able' actions relevant for mothers and child caretakers to improve nutritional practices**

- Formative research is necessary to develop nutrition messages relevant to the constraints facing mothers and child caretakers given the local context.
- Using the ENA approach ensures that health workers and other front-line agents know 'which nutrition messages' need to be given to 'what target' group at 'what precise point in time'. This avoids non-specific and non-effective advice being given to mothers and other child caretakers.

Lesson 6: **Use breastfeeding as the common ground to integrate child survival, reproductive health, and nutrition interventions**

- Breastfeeding promotion can be used to link together nutrition, child survival and reproductive health programs, and this should result in better program synergies.

Lesson 7: Build on what exists rather than creating new systems or structures

- Integrate ENA and BCC interventions into existing community programs of government and NGO field partners to 'fast-track' interventions, expand coverage, and leverage resources.
- Utilize existing community groups rather than create new ones.

Lesson 8: Recognize the importance of strong program management and an in-country presence

- Developing a country-wide program supporting infant feeding and ENA such as that found in Madagascar, initially requires full-time technical assistance, particularly during program start-up and the first years of implementation, and this is best provided through a strong in-country presence to guarantee the program focus and management needed to achieve broad scale results.
- Once support to infant feeding and the ENA approach has been adopted by many government, donor, NGO and university groups, the need for a full-time technical assistance presence should be re-assessed as ownership is assumed by local partners.
- A mechanism, such as the GAIN, is needed in the longer-term to 'watch over' nutrition issues, such as infant feeding and other aspects of ENA, to ensure continuous attention to these issues by national partners in policies and by community partners in their field programs.

Lesson 9: Measure results as 'success breeds success'

- Establish a manageable monitoring and evaluation system that allows progress to be tracked on a regular basis (e.g. annually)
- Results should be shared with front-line workers, particularly good results that show that their efforts to improve nutrition are successful.

Lesson 10: For future sustainability, invest in pre-service training of health service providers in infant feeding and the ENA approach

- Improving and up-dating the infant feeding and ENA content of medical, nursing and midwifery schools, and other relevant institutions, is essential to ensure that tomorrow's health service providers are equipped to support mothers and families in maintaining optimal nutrition practices.

Annex 1 : Background Chronology

1993 - 1995	1996	1997	1998
<ul style="list-style-type: none"> ■ 1993. Beginning of SECALINE I, World Bank funded ■ 1994. Beginning of UNICEF-NAC (Community-based Nutrition Program) ■ 1995. Beginning of BASICS I project in Madagascar, USAID funded 	<ul style="list-style-type: none"> ■ Tina Shanghvi to introduces the ENA concept (June) Part-time Nutrition consultant - Cheryl Combest (July) Consultative research to adapt feeding recommendations to IMCI (Oct) ■ Breastfeeding seminar for medium and high level health personnel (Nov) ■ One day meeting with the paramedical & medical schools to discuss breastfeeding curriculum reform - Edwin Kimbo (Nov) 	<ul style="list-style-type: none"> ■ Harmonization of messages including nutrition by IEC Task force (Jan) ■ BASICS nutrition staff hired included Voahirana Ravelojaona (March) ■ First nutrition IEC material: counseling card on breastfeeding (0-6 months) and <i>Gazety</i> (Apr) ■ Development of training module on breastfeeding (Apr) ■ USAID-Madagascar supports the ENA integration into all USAID funded child survival project. (May) ■ MOU between USAID-UNICEF - Sue Anthony (May) ■ LINKAGES Phase I initiated with hiring of LINKAGES-OMNI Resident Advisor - Ellen Barclay & Office (July) ■ Consensus on food box recommendations by the IMCI working group (Aug) ■ First workshop with journalists (July) ■ First training for members of women's groups (Aug) ■ First GAIN meeting (Nov) ■ Workshop to start the Child-to-Child activity (Nov) ■ End of SECALINE I 	<ul style="list-style-type: none"> ■ National cost-sharing initiated by MOH (Jan) ■ BASICS I Nutrition Consultant hired - Agnès Guyon (March) ■ GAIN #1 workshop for harmonization on nutrition messages ■ First workshop to identify constraints to implement the ENA concept (Apr) ■ Counseling cards and <i>Gazety</i> on nutrition 6-11 months developed. ■ Presentation on Vitamin A supplementation in Nepal - Penny Dawson & Steve Leclerc (Apr) ■ Workshop to include IMCI into the UNICEF supported community-based nutrition project. ■ Meeting with the central pharmacy and partners to streamline Vitamin A and iron supplies ■ Conference on IDD-OMNI ■ Supplementation included into EPI ■ Other GAIN workshops : <ul style="list-style-type: none"> • Nutrition-DHS Analysis (July) • Micronutrients Protocol (Nov) • Nutrition IEC Strategy (Dec) ■ Closing of BASICS I-Madagascar (Sept) ■ End of MOU USAID-UNICEF ■ Beginning of SEECALINE II

1999	2000
<ul style="list-style-type: none"> ■ LINKAGES Phase II initiated with the planning visit to Madagascar - Victoria Quinn & Anne McArthur (LINKAGES-DC) (Apr) ■ New LINKAGES Resident Advisor hired - Agnès Guyon (June) ■ GAIN workshops <ul style="list-style-type: none"> • Support to BFHI (June) • Profiles Victor Aguayo (Measure Communication) (July) • BCC based on "negotiation" Nancy Keith (LINKAGES-DC) (Nov) • Profiles Victor Aguayo (Measure Communication) (Nov) • Start Fianarantsoa regional GAIN with Profiles ■ LINKAGES Nutrition Coordinator - Voahirana Ravelojaona (May) ■ Joint program with JSI initiated (July) <ul style="list-style-type: none"> • Staff Recruitment Technical and Admin (Aug) • Training of staff (Sept) • Activities start in 10 Districts (Oct) ■ Start collaboration with Measure Communication (Sept) ■ TA to revise BFHI modules - Cheryl Combest (Sept) ■ Development of ENA training module I (BF / LAM) for (Oct) <ul style="list-style-type: none"> • Health Workers • Women's groups ■ Editing of BASIC I study comparing well-nourished and malnourished children & distribution ■ Visit to LINKAGES-DC: Agnes Guyon (Oct) ■ Start new MOU with USAID, UNICEF, SEECALINE & MOH ■ LINKAGES-Madagascar M&E officer hired - Zo Rambelason (Dec) 	<ul style="list-style-type: none"> ■ GAIN workshops <ul style="list-style-type: none"> • Strategy Mass Media • IMCI Strategy - Community Nutrition ■ Sub-GAIN <ul style="list-style-type: none"> • Women's health card • Nutrition Jobs Aids for six contact points • Counseling cards on Pre-natal care developed ■ Second provincial GAIN : Antsirabe. ■ Two other provincial GAIN Tamatave & Mahajanga ■ Baseline survey with JSI in 10 districts (Feb) ■ LAM as a FP modern method (Jan-Feb) <ul style="list-style-type: none"> • Material IEC -LAM • International consultant - Marcel Vekemans ■ Annual visit from LINKAGES-DC - Victoria Quinn and Nadra Franklin and visit of AED Senior Vice President Jack Lesar ■ Extension of LINKAGES-AED and JSI activities to 23 districts (May) <ul style="list-style-type: none"> • Staff Recruitment (Field & Admin) ■ Recruitment of Mass Media Specialist - Ranaivomino, ■ Advocacy for ENA for Pre Service Training - Carmen ■ Development of ENA lessons plans for para-medical schools -- Carmen Casanova (Sept) ■ National Vitamin A Supplementation (April-Nov) ■ Development of training modules II and III : <ul style="list-style-type: none"> • Complementary Feeding and Women's Nutrition • Health workers • Women's Groups ■ BFHI Modules (1 self-evaluation ; 4 self-learning) ■ Survey RAP 2000 focusing on breastfeeding (Oct) ■ Contract with pop-singer Poopy: named Ambassador of ■ Exchange visit (GHAI) to Madagascar on ENA - Ghana, ■ ENA training in Mombasa- GHAI (1 LINKAGES + 1 MOH) ■ MOH adopts the ENA approach

2001	2002
<ul style="list-style-type: none"> ■ Visit to LINKAGES -DC: Agnes Guyon (Jan) ■ ENA training of tutors & teachers in para-medical schools ■ Completion of lessons plans for para-medical and medical schools: Carmen Casanova (Infant feeding & IMCI) and Victor Aguayo - MOST (Micronutrients) ■ Medical School : Integration ENA - IMCI (May) ■ Profiles on video tapes with the chief of the Nutrition Unit as narrator ■ Experience on ENA implementation : a video : " The Missing Piece " <ul style="list-style-type: none"> - LINKAGES - BASICS II - JSI. ■ Exchange visit to LINKAGES-Ghana: 3 staff members ■ Mass media on LAM as a FP modern method (Jan-Feb) <ul style="list-style-type: none"> - Creation of TV & Radio Spots & broadcasting - Newspaper articles ■ LINKAGES-AED and JSI continue to implement in 23 districts ■ Annual visit from LINKAGES-DC - Victoria Quinn (Apr) ■ Pilot training & monitoring strategies in 12 Baby Friendly Hospitals ■ LINKAGES Staff- 30 persons ■ Survey RAP 2001 focusing on Complementary Feeding - Family Planning - EPI (Oct) ■ First song on breastfeeding - Profom-Pitiavana (Poopy) ■ Start Baby Friendly Workplace Initiative ■ Presentation of results and strategies at WHO Geneva (Sept) ■ Presentation of results and strategies at the Seventh Nutrition Conference in Vienna (Sept) ■ Participation in the Regional Nutrition Network - UNICEF and presentation of the ENA approach (Oct) ■ Beginning of the political crisis (Oct) ■ Phase II ends (Oct): Beginning of alliance with NGOs to initiate Phase III provincial approach ■ Reduction of LINKAGES staff to 20 persons ■ Participation in the IYCF workshop in WHO-Geneva (Dec) to share the Malagasy experience 	<ul style="list-style-type: none"> ■ Political crisis from January to August ■ Visit to LINKAGES -DC: Agnes Guyon (Jan) ■ Two new songs on breastfeeding by Poopy ■ Intensified training for private sectors (NGOs & private doctors) (Jan) ■ ENA training of tutors & teachers in para-medical & medical schools (Feb) ■ Start collaboration with MOST (Share office) (March) ■ Evacuation of Agnes Guyon, Resident Advisor, during political crisis (Apr) ■ Follow-up visit: Agnes Guyon (June) ■ Development of a training Module "Promoting ENA during nutrition crisis" and intensive training for selected NGOs (June) ■ Revised district approach in ten districts (Revitalization & urban strategy) (June) ■ Mass campaign on Breastfeeding, Complementary feeding, and Nutrition during crisis (songs and spots with Poopy) (June-July) ■ Revitalization across the 10 districts ■ National extension for the BFHI self-evaluation and self-learning (July) ■ Training of radio announcers (Aug) ■ Qualitative assessment on Women's Groups (Aug-Sept) ■ Revised draft self-learning ENA modules for health workers (Sept) ■ Participation to the WABA conference in Arusha: Agnes Guyon, Poopy and the LINKAGES Mass Media coordinator, Ranaivomino, Tovonony. Three presentations were made and 2 Poopy's concerts. ■ Follow-up visit: Agnes Guyon & Victoria Quinn (Oct) ■ New Country Coordinator in place: Voahirana Ravelojaona (Oct) ■ Survey RAP 2002 focusing on Sustainability (Oct) ■ ENA Training for GAIN members started (Oct) ■ Update for the National Nutrition Plan of Actions (Oct) ■ Finalization of Global Forum proposal for extension to 3 new districts in Tulear and Mahajanga (Oct) ■ Visit to Madagascar: Agnes Guyon to work with the JSI and BASICS II teams to document lessons learnt in Madagascar ■ Visit to N'Dola, Zambia (LINKAGES-AED, Zambia) of Voahirana Ravelojaona, and one MOH person (Nov)

2001	2002
<ul style="list-style-type: none"> ■ Global Forum grant awarded (Jan) ■ Visit from Zo Rambeloson to DC for a PAHO meeting on complementary feeding indicators (Jan) ■ Visit to DC: Agnes Guyon (Jan) ■ Poopy's contract renewed: 1 song on complementary feeding ■ Follow-up visit: Agnes Guyon & Victoria Quinn (Apr) ■ International workshop on the Essential Nutrition Action approach organized by LINKAGES-AED, BASICS II and MOH (Apr) ■ Revised LINKAGES strategy and staffing to include the Global Forum activities. ■ Baseline survey in Tulear and Mahajanga - Global Forum (May) ■ Visit to Michael Hainsworth, M&E (May) ■ Visit to DC: Voahirana Ravelojaona (June) ■ Visit of Carmen Casanova for pre-service: focus on M&E ■ Departure of Zo Rambeloson, M&E (Aug) ■ End of JSI: May/June ■ Poopy's : 1 song on women's nutrition and one live CD with all the nutrition songs ■ Follow-up visit: Agnes Guyon (Visit to Global Forum sites) ■ Baby Friendly Workplaces re-started ■ Participation in the IYCF workshop in WHO-Geneva to share the Malagasy experience, particularly ENA and pre-service activities (Dec) 	<ul style="list-style-type: none"> ■ Departure of Ranaivomino, Tovonony, Mass Media (Feb) ■ Visit of Zo Rambeloson, M&E (March) ■ Endline survey Tulear and Mahajanga - Global Forum (Apr) ■ Visit to Michael Hainsworth, M&E (Apr) ■ National Nutrition Policy finalized (Apr) ■ Advocacy visit for PMTCT (Jean Tsula, LINKAGES-AED, Zambia) (Mar) ■ Presentation of the ENA approach at the SOTA meeting (June) ■ National Nutrition Policy approved (July) ■ New USAID bi-lateral starts (June) ■ Phase III ends ■ Reduction of LINKAGES staff to 10 persons (July) ■ Participation in the Regional Nutrition Network - UNICEF and presentation of women's nutrition in the context of ENA (Aug) ■ Follow-up visit: Agnes Guyon & Victoria Quinn (Sept) ■ New Strategy discussed focusing on Complementary Feeding (Sept) ■ Lessons learned meeting (Sept)

Annex 2: Comparison between BASICS I and LINKAGES-AED/JSI Approaches

During Phase II of LINKAGES-AED presence in Madagascar, the collaborative program with JSI focused on supporting health facilities and communities in 23 districts of Antananarivo and Fianarantsoa regions. This joint program intended to 'take to scale' lessons learned from the earlier work of the BASICS I pilot project, which also operated but to a much lesser extent in the same two regions.

Existing behavior change tools, messages and protocols were adapted by LINKAGES-AED and JSI. The original approach was also improved by further integrating breastfeeding into nutrition, child survival and family planning activities. The inclusion of negotiation for behavior change to improve infant feeding practices was another new addition. Thus the pilot work of BASICS I undertaken in the two original districts was adapted and extended to a total of 10 new districts in 2000 and a total of 13 additional new districts in 2001.

BASICS I (1995-1998)

Approach : Intensive pilot

Coverage : (2 districts in 2 regions)

700,000 people in 55 communes

BCC in 4 "program intensive" communes covering 80,000 people

Supervisory Field Staff:

2 technical staff per district (1/40,000)

Technical themes:

- Breastfeeding and Essential Nutrition Actions
- EPI
- Start-up of community IMCI

LINKAGES-AED and JSI (1999-2003)

Approach : Going to Scale

Coverage : (23 districts in 2 regions)

6,000,000 people in 286 communes

BCC in all communes

Supervisory Field Staff :

2 technical staff per district (1/230,000)

Technical themes:

- Breastfeeding and Essential Nutrition Actions
- EPI
- Community IMCI
- Family planning
- STI prevention and treatment
- Young adult reproductive health
- HIV/AIDS primary prevention
- Community based distribution of family planning
- HMIS & logistics

Annex 3: The LINKAGES-AED Intervention Districts

Original 10 districts: 1999-2003

Province : Antananarivo

1. Antananarivo Renivohitra
2. Antananarivo Avaradano
3. Antananarivo Atsimondrano
4. Antsirabe I
5. Antsirabe II (old BASICS I)
6. Betafo

Province: Fianarantsoa

1. Ambositra
2. Ambohimahasoa
3. Fianarantsoa I
4. Fianarantsoa II
(old BASICS I)

Additional 13 districts 2001-2002

(including 3 cyclone districts)

Province : Antananarivo

1. Ambatolampy
2. Manjankandriana
3. Ankazobe
4. Anjozorobe
5. Ambohidratrimo

Province: Fianarantsoa

1. Ambalavao
2. Fandriana
3. Ifanadina
4. Manakara
5. Mananjary
6. Vohipeno
7. Vangaindrano
8. Farafangana
9. Nosy Varika

Additional 3 districts 2003-2004

"Second generation"

Province: Tulear

1. Tulear I

Province: Mahajanga

1. Mahajanga I
2. Mahajanga II

Annex 4:

Focus of LINKAGES-AED Messages to Improve Infant, Young Child and Women's Nutrition

It is recommended:

- to exclusively breastfeed 0 to 5.9 months
- to give the breast to infants 0 to 5.9 months at least 10 times a day
- to introduce complementary food starting on the sixth month and to continue breastfeeding
- to continue breastfeeding up to 24 months and beyond
- to give the breast at least 8 times a day to children aged 6-23 months
- to give three meals per day to infants aged 6 to 11.9 months in addition to breastmilk
- to give three meals and two snacks a day to infants 12-23.9 months in addition to breastmilk
- to use an individual plate for the child to allow mothers to assess the amount of food consumed by the child
- to increase the frequency of breastfeeds during illness
- to increase the frequency of meals during illness for children over 6 months
- to increase the frequency of breastfeeding when an infant 0-5.9 months recovers from illness
- to increase the frequency of breastfeeding and meals when a child over 6 months recovers from illness
- to give vitamin A supplements to children aged 6 to 59 months every six months
- to give vitamin A to post-partum women within 8 weeks of delivery
- for a woman to eat more during pregnancy
- for a woman to eat more during lactation
- for a woman who is breastfeeding an infant 0 to 5.9 months to use LAM as a family planning method
- for a pregnant woman to receive iron/folic acid supplementation
- for all family members to eat iodized salt

Annex 5: Visualization in Participatory Programs (VIPP)

Visualization in Participatory Programs* (VIPP) is a people-centered approach to planning, training, and groups events. This approach places its trust in the capacities and creativity of people. VIPP combines techniques of visualization with methods for interactive learning. Everyone takes part in the process of arriving at a consensus. Less talkative participants find a means of expression and those who might normally dominate a group lose control and are forced to let others have their say. By visualizing the group's main proceedings, repetition and circularity in argument are reduced.

At the core of VIPP is the use of a large number of multi-colored paper cards of different shapes and sizes. Participants express their main ideas on these cards in large enough letters or diagrams to be seen by the whole group. Private note taking is not necessary as the clustered cards are photographed, scanned, or photocopied for each participant for a collective memory.

The uniqueness of VIPP lies in the creative combination of different approaches, all of which emphasize the importance of people's involvement in formulating development policy and in training development workers.

How we learn...

- 1% through taste
- 2% through touch
- 3% through smell
- 11% through hearing
- 83% through sight

How we remember...

- 10% of what we read
- 20% of what we hear
- 30% of what we see
- 50% of what we see and hear
- 80% of what we say
- 90% of what we say and do



Annex 6: Printed IEC materials



Counseling Cards (for health workers and community)

- 4 on optimal breastfeeding
- 2 on Lactational Amenorrhea Method (LAM)
- 4 on complementary feeding

Gazety (for health workers and community)

- Breastfeeding and LAM
- Complementary feeding 6 to 11 months
- Complementary feeding 12 to 24 months

Additional notes (for health workers)

- Problems of breastfeeding and their solutions
- Milk expression

Child Health's booklet and Women's Health booklet (for health workers and community)

- Both integrate optimal ENA practices with child survival and reproductive health interventions

ENA Job Aids (for health workers)

- 1 set of 6 Jobs Aids for each of the health contact points (pre-natal care, delivery, post-natal, immunization, well baby visit, sick child visit)
- The ENA Job Aids also contain succinct information on key child survival and reproductive health interventions needed at each contact

Invitation cards for Family Planning (for health workers and community)

- € 1 urban with Poopy
- € 1 rural similar to counseling card

Breastfeeding invitation card (for the revitalization campaign)

Breastfeeding Banner (for Baby Friendly Hospitals & Health facilities)

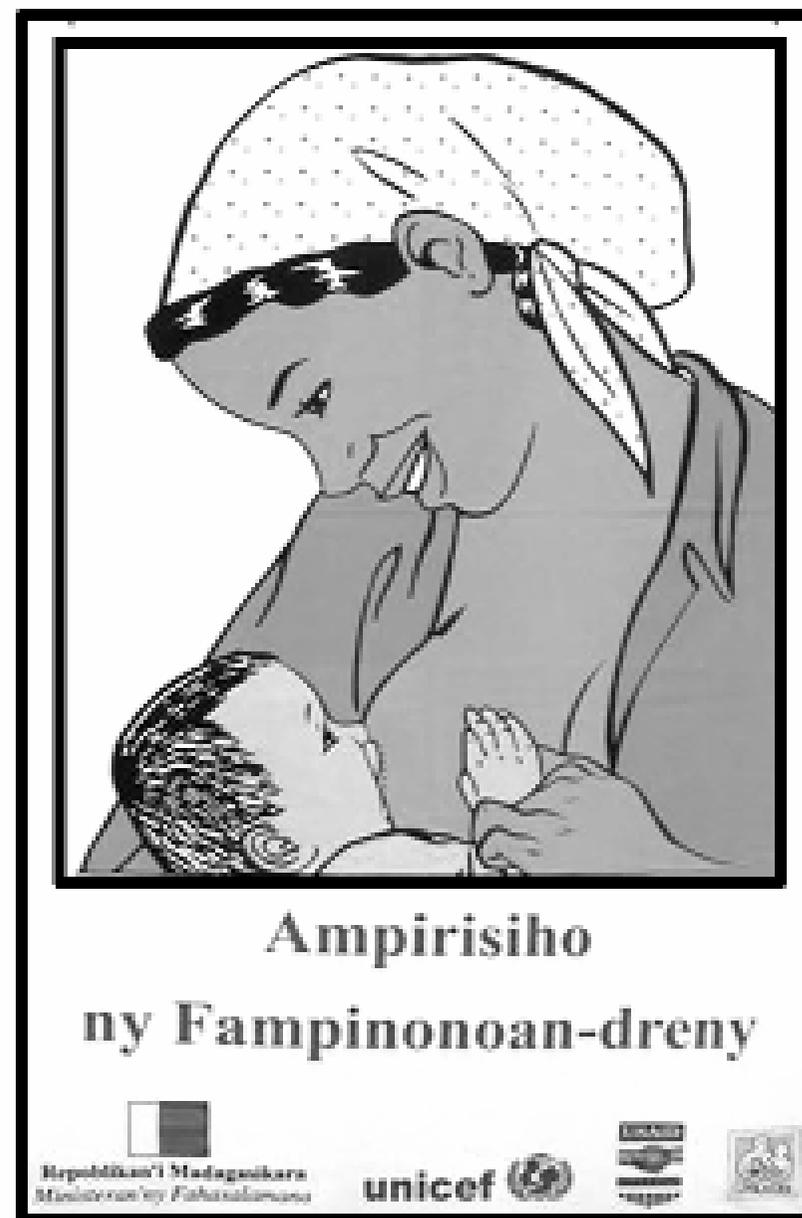
Medal (for Baby Friendly Hospitals)

Medal (for Baby Friendly Workplaces)

Banners on breastfeeding and complementary feeding (for Poopy's concert)

Nutrition Diploma (for health workers and community)

- For children at 2 years of age who have an appropriate growth curve, have been breastfed until 2 years, and have received one dose of Vitamin A.



Annex 7: Summary of LINKAGES-AED Training Modules

Three ENA training modules for Health Workers

(French and English)

1. Breastfeeding & LAM
2. Complementary feeding & feeding of the sick child
3. Women's Nutrition - Integrated nutrition

All modules include micronutrient information

Three ENA training modules for Nutrition Volunteers

(members of Women's Groups) (Malagasy, French, English)

1. Breastfeeding & LAM
2. Complementary feeding & feeding of the sick child
3. Women's Nutrition - Integrated nutrition

All modules include micronutrient information

One self-learning ENA training manual for Health Workers

1. Essential Nutrition Actions module
2. IEC and BCC modules

One ENA training module on ENA during Crisis

(French, English)

Based on the ENA modules for nutrition volunteers

Four Self-learning training modules on Baby Friendly Hospital Initiative

(French, English)

1. Advocacy
2. Breastfeeding practices
3. IEC and BCC
4. Problems of breastfeeding and their solutions

One BFHI Self-evaluation Module

One training module on Baby Friendly Workplace Initiative

(French)

Based on the ENA modules for nutrition volunteers

Lessons plans for ENA & IMCI

- for medical students for years 1 to 7 (French, English)
- for nurse and midwifery students for 1 to 3 years
- all include:
 - objectives for practicum sites in Pediatrics, Public Health, and Gynecology
 - community training module

Annex 8: List of Reports

Cost Effectiveness Analysis of Linkages "Infant and Young Child Feeding program in Madagascar" . June 2004

Garie Chee, Kimberley Smith, Marty Makinene,
Zo Rambeloso Abt & LINKAGES CD (Available in English)

Promoting Exclusive Breastfeeding in Madagascar: A Streamlined Approach to Expand to Two New Regions: Tulear and Mahajanga. 1. Final Report & 2. Analysis of the Baseline and Endline Surveys. Global Forum and LINKAGES-AED, Madagascar. June 2004

Victoria Quinn, Ph. D., Agnes Guyon, M.D., M.P.H.
LINKAGES-AED & Claudine Ramiandrazafy, Director of Pre-Service Training for Paramedical Professionals, Ministry of Health (MOH). (available in English)

Assessment of the use of Job Aids by Health Workers. August 2003.

Dr Agnes Guyon, Linkages Country Advisor,
Herivolona Rabemanantsoa, LINKAGES Madagascar.
(Available in French and English)

Assessment of the Behavior Change Strategy for Young Child Nutrition, Vaccination, and Family Planning. Tulear and Mahajanga, Global Forum and LINKAGES-AED, Madagascar. May 2003

Dr Agnes Guyon, LINKAGES Country Advisor, Zo Rambeloso, LINKAGES Madagascar.
(available in English)

Assessment of the Behavior Change Strategy for Young Child Nutrition, Vaccination, and Family Planning. Antananarivo and Fianarantsoa, LINKAGES-AED, Madagascar. October 2002

Dr Agnes Guyon, LINKAGES Country Advisor,
Mr Zo Rambeloso, M&E LINKAGES Madagascar.
(available in French and English)

The Experience of Involving Members of Women's Groups to in Nutrition Promotion in Madagascar. October 2001

Agnes Guyon (Resident Advisor - Madagascar), Brian Mulligan (LINKAGES Intern - Madagascar), Zo Rambeloso (LINKAGES M/E Officer - Madagascar), Anh Thu Hoang (Consultant - Madagascar), Luann Martin (LINKAGES/DC, Victoria Quinn (LINKAGES/DC). (available in French and English)

Assessment of the Behavior Change Strategy for Young Child Nutrition, Vaccination, and Family Planning Antananarivo and Fianarantsoa. Linkages - Madagascar. October 2001

Dr Agnes Guyon, LINKAGES Country Advisor, Mr Zo Rambeloso, LINKAGES Madagascar, Mr Brian Mulligan, Linkages Intern,
Dr Hantaniaina Randriamampianina, Director of Preventive Medicine of MOH, Dr Simon Christopher Rakotonirina, Chief of Nutrition Division of MOH. (available in French and English).

Intersectoral Collaboration on Nutrition : A Case Study of Madagascar's - Groupe d'Actions Intersectoriel pour la Nutrition (GAIN). April 2001

Dr Hantanirina Randriamampianina, Director of Preventive Medicine of MOH, Dr Agnès Guyon, LINKAGES Resident Advisor Madagascar, Dr Simon Christopher Rakotonirina, Chief of Nutrition Division,
Margaret Kajeckas, LINKAGES Consultant. (available in French and English)

Assessment of Behavior Change Strategy for Breastfeeding and LAM Antananarivo and Fianarantsoa. LINKAGES.- Madagascar. October 2000.

Dr Agnès Guyon, LINKAGES Country Advisor,
Zo Rambeloson, LINKAGES Madagascar,
Margaret Kajeckas, Writer
(available in French and English)

Rapport des Enquêtes de base sur les Actions Essentielles en Nutrition au niveau des Etablissements de Santé & Ménages. Février 2000

Dr Esther Rarivoharilala, Directeur du Développement des Districts Sanitaires du Ministère de la Santé,
Dr Hantaniaina Randriamampianina, Directeur de la Médecine Préventive du Ministère de la Santé, Dr Agnès Guyon, Conseillère Résidente de LINKAGES Madagascar, Dr Simon Christophe Rakotonirina, Chef de Service de la Nutrition du Ministère de la Santé, Dr Norolalao Rakotondrafara Ralitera, Directeur Interrégional des Districts Sanitaires d'Antananarivo, Dr Henri Ravelomanantsoa, Directeur Interrégional des Districts Sanitaires de Fianarantsoa, Zo Rambeloson, Responsable Suivi et Evaluation de LINKAGES Madagascar.(available in French)

Influences on Nutritional Behaviors. Comparison between well-nourished and malnourished children, using the positive and negative deviances methodology. Isorana, Fianarantsoa II - Madagascar. April-July 1998
BASICS / Washington, BASICS / Madagascar, Meghan A. McSorley, BASICS, Rabenasolo Oely Fanomezana, BASICS, Peggy Roudaut, BASICS, Nancy Keith, BASICS & LINKAGES, Agnes Guyon, BASICS & LINKAGES, Margaret Kajeckas, LINKAGES, Consultant (available in French and English)

The Integrated Management of Childhood illness (IMCI): The Adaptation of Feeding Recommendations for Antsirabe II and Fianarantsoa II Districts of Madagascar. BASICS I. October 1996

Adwoa Steel, Cheryl Combest - (available in French and English)

Annex 9

List of LINKAGES-AED Staff

The LINKAGES-AED staff in Madagascar varied from one person to almost thirty persons over the life of the project.

Name	Position	Name	Position
Guyon Agnes	Resident Advisor 99-02 then Regional Advisor 02-04	Andrianantoandro-Ravelojaona, Voahirana	Nutrition Coordinator, then Country Coordinator 02-04
Barclay Ellen	Resident Advisor 97-99	Randriakinasa Mireille	Program Assistant 97-00
Rambelason, Zo Jariseta	Monitoring & Evaluation	Rabemanantsoa, Herivololona	Nutrition technician then M&E Coordinator
Ranaivomino, Tovonony	Mass Media	Ravonimanantsoa, Priscilla Hanta	Pre-Service training
Andrianjafy, Nilomboahangy	BFHI, BFWP, then Coordinator Fianarantsoa	Ramanamisata, Marc Antoine	Nutrition technician then Coordinator Tulear 03-04
Rakotonirina, H. Fanja Marie Colombe	Nutrition technician then Coordinator Antananarivo	Randrianaivo, Séraphin Philunor	Nutrition technician then Coordinator Mahajanga 03-04
Andrianasolo, Sehenolalao Anjarasoa	Nutrition technician	Ravaosolomampionona, Parson	Nutrition technician
Rabemanana , Alphonse André	Nutrition technician	Razafindramanana, François de Salles	Nutrition technician
Rajaomaroson, Andriamilantotiana	Nutrition technician	Razafison Rivo Herisoa	Nutrition technician
Rakotoarimanitra, Wilson	Nutrition technician,	Rasamimanana Herilaza	Nutrition technician
Rakotomalala Norotiana	Nutrition technician	Randriaparazato, Henri	Nutrition technician
Ramarokoto Sahondravololona	Nutrition technician	Rakotobearison-Rabe, Hantamalala	Program Assistant
Rakotovao, Eliane Anita	Administrative Assistant	Andrianifahanana, Chrystel	Financial Coordinator
Raherinirainy, Dimby Arimalala Gildas	Secretary	Rakotondrazaka, Samy Bertho	Driver
Bearivony Meja	Driver	Raharijaona Desire	Driver
Andriamanatenasoa Ernest	Driver	Randrianravelo Jean-Marie Fidele	Driver
Raharivony, Odette	Office Maid	Rasoarimalala, Arivony Annie	Office Maid

LINKAGES-AED Madagascar Staff



Over time, the technical and administrative support staff in LINKAGES-AED/DC who supported the Madagascar program included:

Name	Position
Quinn Victoria	Country Program Technical Manager 99-04
Keith Nancy	BCC Coordinator 99-02
Franklin Nadra	Manager M & Evaluation 99-04
Hainsworth Michael	Senior M&E Specialist 02-04
McCarther Anne	Program Officer 97-99
Hardware Jacqueline	Program Officer 99-00
Gray Claudia	Program Associate 00-04
Starkweather Ann	Administrative Officer 01-04