Using ‘Essential Nutrition Actions (ENA)’ to Accelerate Coverage with Nutrition Interventions in High Mortality Settings

June 2004

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BASICS II

BASICS II is a global child survival project funded by the Office of Health and Nutrition of the Bureau for Global Health of the U.S. Agency for International Development (USAID). BASICS II is conducted by the Partnership for Child Health Care, Inc., under contract no. HRN-C-00-99-00007-00. Partners are the Academy for Educational Development, John Snow, Inc., and Management Sciences for Health. Subcontractors include Emory University, The Johns Hopkins University, The Manoff Group, Inc., the Program for Appropriate Technology in Health, Save the Children Federation, Inc., and TSL.
Abstract
The Essential Nutrition Actions (ENA) is an approach to expand the coverage of six proven nutrition interventions through actions at health facilities, in communities, and through communications channels (Exclusive Breastfeeding (EBF) for six months; Adequate complementary feeding (CF) from about 6–24 months with continued BF for at least two years; Appropriate nutritional care of sick and severely malnourished children; Adequate intake of vitamin A for women and children; Adequate intake of iron for women and children; and Adequate intake of iodine by all members of the household). The ENA approach provides health managers and health care workers with a holistic framework for addressing the various aspects of malnutrition in their country. Using what we currently know about nutrition and applying lessons learned from five countries experiences in implementing and adapting the ENA approach, we now have solid basis and the tools for rapidly expanding the scale at which these proven effective interventions can be implemented.

Recommended Citation

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USAID
U.S. Agency for International Development
Office of Health and Nutrition
Bureau for Global Health
Washington, DC
Website: www.usaid.gov/pop_health/

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CONTENTS

Figures ................................................................................................................................. 4
Acronyms ............................................................................................................................ 5
Acknowledgements ............................................................................................................ 8
Summary ............................................................................................................................. 9
I. Introduction ..................................................................................................................... 12
II. Essential Nutrition Actions (ENA) Framework ............................................................. 15
   What is ENA? ................................................................................................................... 15
   Why is there a need for ENA? ......................................................................................... 17
      As an Analytic Process ............................................................................................... 19
      As a Program Approach ............................................................................................. 20
   What are the tools for implementing ENA? ................................................................. 21
      Advocacy .................................................................................................................... 21
      Assessments .............................................................................................................. 23
      Integrating ENA in Health Services ......................................................................... 23
      Community Actions .................................................................................................. 23
      Communications and IEC .......................................................................................... 24
III. Case Studies in the Application of Essential Nutrition Actions .................................... 25
    SENEegal ...................................................................................................................... 27
       The Programmatic Context ....................................................................................... 27
       ENA Facilitators and Activities ................................................................................. 27
       Changes in Processes and Delivery Systems ............................................................ 29
       Changes in Knowledge and Practice at the Household Level .................................... 30
    BENIN ......................................................................................................................... 32
       The Programmatic Context ....................................................................................... 32
       ENA Facilitators and Activities ................................................................................. 33
       Changes in Processes and Delivery Systems ............................................................ 35
       Changes in Knowledge and Practices at the Household Level ................................... 36
    NIGERIA ....................................................................................................................... 36
       The Programmatic Context ....................................................................................... 36
       ENA Facilitators and Activities ................................................................................. 38
       Changes in Processes and Delivery Systems ............................................................ 39
       Changes in Knowledge and Practice at the Household Level ................................... 39
    MADAGASCAR .......................................................................................................... 40
       The Programmatic Context ....................................................................................... 40
       ENA Facilitators and Activities ................................................................................. 42
       Changes in Processes and Delivery Systems ............................................................ 44
       Changes in Knowledge and Practice at the Household Level ................................... 45
    INDIA ........................................................................................................................... 46
       The Programmatic Context ....................................................................................... 46
       ENA Facilitators and Activities ................................................................................. 47
       Changes in Processes and Delivery Systems ............................................................ 47
       Changes in Knowledge and Practice at the Household Level ................................... 49
IV. Discussion of Experiences in the Use of ENA ............................................................... 51
   A. ENA Facilitated Changes in Processes Related to Improved Nutritional Outcomes .... 51
      Routine Health Services Expanded the Delivery of Priority Nutrition Services ........... 51
      Nutrition Policies Were Revised .............................................................................. 52
Access of Families to Commodities and Health Promoters Improved................................. 52
The Capacity of Community Groups and Community-Based Workers Improved.............. 53
Communications about Nutrition Expanded to Reach Many Different Audiences.............. 54
Access of Families to Critical Information and Family Knowledge Improved.................... 55
B. Lessons Learned about What Works and How ............................................................... 56
   At National Level .............................................................................................................. 56
   At State and District Levels ............................................................................................ 57
   At Community Level ....................................................................................................... 58
Summary ............................................................................................................................... 59
Next Steps ............................................................................................................................ 59

Tables
   Table 1. Selected Demographic, Health, and Nutrition Indicators .................................... 14
   Table 2. Shift in Focus after the Introduction of ENA in Senegal ..................................... 28
   Table 3. Shift in Focus after the Introduction of ENA in Benin ........................................ 34
   Table 4. Shift in Focus after the Introduction of ENA in Nigeria ....................................... 37
   Table 5. Shift in Focus After the Introduction of ENA in Madagascar ............................. 41
   Table 6. Change in Focus Brought by ENA in India (CARE/INHP II) ............................. 47

Figures
   Figure 1. Relationship of Malnutrition and Infections Diseases: Fraction of Disease
   Attributed to Being Underweight .................................................................................... 12
   Figure 2. Under Five Mortality Rate Trend Estimates ..................................................... 13
   Figure 3. Age-wise Decline in Nutrition .......................................................................... 16
   Figure 4. Unmet Need for Essential Nutrition Actions .................................................. 19
   Figure 5. Essential Nutrition Actions: Operationalizing Nutrition Interventions to Reduce
   Mortality .......................................................................................................................... 26
   Figure 6. Senegal—Exclusive Breastfeeding of Children < 6 Months, 24 Hour Recall,
   Louga, and Thies Regions .............................................................................................. 31
   Figure 7. Senegal: Coverage of National Scale Vitamin A Distribution among Children
   Ages 6–59 Months .......................................................................................................... 32
   Figure 8. Exclusive Breastfeeding Rates in the Borgou Region, Benin .............................. 36
   Figure 9. Nigeria—Exclusive Breastfeeding of Children < 6 Months, 24 Hour Recall, Three
   States ............................................................................................................................... 40
   Figure 10. Behaviors Related to Infant Nutrition, India ...................................................... 50
   Figure 11. Behaviors of Mothers during Pregnancy and Neonatal Period, India ............ 50
### ACRONYMS

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
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<tbody>
<tr>
<td>ACF</td>
<td>Appropriate Complementary Feeding</td>
</tr>
<tr>
<td>ANM</td>
<td>Auxiliary Nurse-Midwives (India)</td>
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<tr>
<td>ARI</td>
<td>Acute Respiratory Infection</td>
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<tr>
<td>ASPI</td>
<td><em>Activités de Suivi Post Formation Intégré</em> or Post-Training Follow-Up (Senegal)</td>
</tr>
<tr>
<td>AWW</td>
<td>Anganwadi Workers (India)</td>
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<tr>
<td>BCC</td>
<td>Behavior Change Communication</td>
</tr>
<tr>
<td>BF</td>
<td>Breastfeeding</td>
</tr>
<tr>
<td>BFHI</td>
<td>Baby-Friendly Hospital Initiatives</td>
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<tr>
<td>CA</td>
<td>Change Agents (India)</td>
</tr>
<tr>
<td>CAPA</td>
<td>Catchment Area Planning and Action (Nigeria)</td>
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<tr>
<td>CBMS</td>
<td>Community-Based Monitoring Systems</td>
</tr>
<tr>
<td>CBO</td>
<td>Community-Based Organization</td>
</tr>
<tr>
<td>CCF</td>
<td>Christian Children’s Fund</td>
</tr>
<tr>
<td>CF</td>
<td>Complementary Feeding</td>
</tr>
<tr>
<td>CHP</td>
<td>Community Health Promoters</td>
</tr>
<tr>
<td>CHWs</td>
<td>Child Health Weeks</td>
</tr>
<tr>
<td>C-IMCI</td>
<td>Community-Integrated Management of Childhood Illness</td>
</tr>
<tr>
<td>CPH</td>
<td>Community Partnerships for Health (Nigeria)</td>
</tr>
<tr>
<td>CRS</td>
<td>Catholic Relief Services</td>
</tr>
<tr>
<td>CVA</td>
<td><em>Communauté Villageoise d’Animation</em> (Madagascar)</td>
</tr>
<tr>
<td>DANIDA</td>
<td>Danish aid agency</td>
</tr>
<tr>
<td>DALY</td>
<td>Disability-Adjusted Life Year</td>
</tr>
<tr>
<td>DDS</td>
<td><em>Departmental de la Santé</em></td>
</tr>
<tr>
<td>DHS</td>
<td>Demographic and Health Surveys</td>
</tr>
<tr>
<td>DS</td>
<td>Demonstration Sites (India)</td>
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<tr>
<td>DWCD</td>
<td>Department of Women and Child Development (India)</td>
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<tr>
<td>EBF</td>
<td>Exclusive Breastfeeding</td>
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<td>ELS</td>
<td>Early Learning Sites (India)</td>
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<tr>
<td>ENA</td>
<td>Essential Nutrition Actions</td>
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<tr>
<td>EPI</td>
<td>Expanded Program of Immunization</td>
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<tr>
<td>FP</td>
<td>Family Planning</td>
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<tr>
<td>Acronym</td>
<td>Full Form</td>
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<tr>
<td>GAIN</td>
<td><em>Groupe d’Actions Inter-Sectoriel en Nutrition</em> (Madagascar)</td>
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<tr>
<td>GMP</td>
<td>Growth Monitoring and Promotion</td>
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<tr>
<td>GOI</td>
<td>Government of India</td>
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<tr>
<td>HIV</td>
<td>Human Immuno-deficiency Virus</td>
</tr>
<tr>
<td>HMIS</td>
<td>Health Management Information System</td>
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<tr>
<td>ICDS</td>
<td>Integrated Child Development Services (India)</td>
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<tr>
<td>IDD</td>
<td>Iodine deficiency Disorders</td>
</tr>
<tr>
<td>IEC</td>
<td>Information-Education-Communication</td>
</tr>
<tr>
<td>IFA</td>
<td>Iron/Folic Acid</td>
</tr>
<tr>
<td>IMCI</td>
<td>Integrated Management of Childhood Illness</td>
</tr>
<tr>
<td>INHP</td>
<td>Integrated Nutrition and Health Project (India)</td>
</tr>
<tr>
<td>ITN</td>
<td>Insecticide Treated Nets</td>
</tr>
<tr>
<td>IVACG</td>
<td>International Vitamin A Consultative Group</td>
</tr>
<tr>
<td>LAM</td>
<td>Lactation Amenorrhea Method</td>
</tr>
<tr>
<td>LGA</td>
<td>Local Government Area</td>
</tr>
<tr>
<td>MOH</td>
<td>Ministry of Health</td>
</tr>
<tr>
<td>MOHFW</td>
<td>Ministry of Health and Family Welfare (India)</td>
</tr>
<tr>
<td>MOU</td>
<td>Memorandum/a of Understanding</td>
</tr>
<tr>
<td>NGO</td>
<td>Non-Governmental Organization</td>
</tr>
<tr>
<td>NHD</td>
<td>Nutrition and Health Days (India)</td>
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<td>NIDs</td>
<td>National Immunization Days</td>
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<tr>
<td>PAIN</td>
<td><em>Paquet d’Activités Intégrés de Nutrition</em> (Senegal)</td>
</tr>
<tr>
<td>PIC</td>
<td><em>Plan Intégré de Communication</em></td>
</tr>
<tr>
<td>PD</td>
<td>Positive Deviance</td>
</tr>
<tr>
<td>PL 480</td>
<td>Public Law number 480</td>
</tr>
<tr>
<td>RAP</td>
<td>Rapid Assessment Procedure</td>
</tr>
<tr>
<td>PMA/N</td>
<td><em>Paquet Minimum d’Activité de Nutrition</em> (Benin)</td>
</tr>
<tr>
<td>PMTCT</td>
<td>Prevention of Mother to Child Transmission</td>
</tr>
<tr>
<td>PRN</td>
<td>Poverty Reduction and Nutrition project of The World Bank (Senegal)</td>
</tr>
<tr>
<td>PRI</td>
<td>Panchayati Raj Institutions (India)</td>
</tr>
<tr>
<td>RCH</td>
<td>Reproductive and Child Health</td>
</tr>
<tr>
<td>RS</td>
<td>Replication Sites (India)</td>
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</tbody>
</table>
SANA  Service Alimentation et Nutrition Appliqué
SEECALINE  Nutrition project supported by The World Bank (Madagascar)
SES  Socio-Economic Status
SMT  Self-Monitoring Tool
SNID  Sub National Immunization days
TBA  Traditional Birth Attendant
TIPS  Trial of Improved Practices
UNICEF  United Nations Children’s Fund
USAID  U.S. Agency for International Development
VCT  Voluntary Counseling and Testing
WHO  World Health Organization
ACKNOWLEDGEMENTS

The authors would like to express their gratitude to: Dr. Gretel Pelto (Cornell University) and Dr Stuart Gillespie for their review of the first draft.

They would also like to thank: Ms. Lily Kak/USAID, Ms. Elizabeth Fox/USAID, Dr. Timothy Quick/USAID, Ms. Hope Sukin/USAID, Dr. Victoria Quinn/AED, Dr. Agnes Guyon/AED, Dr. Paul Adovohkekpe UNICEF/Benin, Dr. Raima Moudachirou, Ministry of Health/Benin, and Dr. Ciro Franco ATN/USAID project, Mali.
SUMMARY

The Basic Support for Institutionalizing Child Survival (BASICS II) project, the flagship child health project of the U.S. Agency for International Development (USAID), has made nutrition a central component of child health programs. Its focus is increasing coverage in scaled up programs of a group of proven effective nutrition interventions. The Essential Nutrition Actions (ENA) approach builds on a country’s existing nutrition work and, using delivery channels within and outside the formal health structure, links nutrition with health services and community based organizations to reach high coverage.

This paper highlights the experiences of BASICS II and its partners during 1997–2004, when five countries (Benin, India, Madagascar, Nigeria, and Senegal) used the ENA approach to strengthen their nutrition programs. It is hoped that the lessons learned from early experiences will further strengthen nutrition programs in these countries and in other countries interested in applying this approach. The main audiences for this paper are implementers and decision-makers worldwide, who wish to improve nutrition and reduce mortality and morbidity through the expanded use of nutrition interventions.

Maximizing the use of limited resources requires ENA to prioritize nutrition actions. One priority is to reduce missed opportunities by incorporating key nutrition services and messages into existing health services contacts. This combined with the strategic selection of a network of community organizations to reach high coverage, is one of the guiding principles of the approach.

First conceptualized as a framework to assess the status of progress in six intervention areas, ENA has evolved into a comprehensive program implementation strategy that is particularly suitable for a variety of resource-poor settings. Implementation of ENA involves three main lines of work:

1. Incorporating six proven interventions into maternal and child health services and expanding community outreach, particularly in under-served areas.

2. Building capacity at community level for delivering ENA interventions through community workers and organizations, and volunteers.

3. Using multiple communications channels to inform, sensitize and motivate key audiences.

To prepare this paper, ENA guidelines were used as an analytic tool to assess the implementation characteristics of five country programs. Specifically, the following questions were addressed:

Six Technical Interventions of Essential Nutrition Actions

- Adequate intake of iodine by all members of the household.
- Exclusive breastfeeding (EBF) for six months;
- Adequate complementary feeding (CF) from about 6–24 months with continued BF for at least two years;
- Appropriate nutritional care of sick and severely malnourished children;
- Adequate intake of vitamin A for women and children;
- Adequate intake of iron for women and children.
• Are the six priority nutritional interventions programmed to reach large scale?
• Are nutritional programs integrated with other programs especially with other maternal and child health interventions that are important for reducing malnutrition, mortality, and morbidity?
• Are the interventions being strengthened at different levels i.e., national, district, facility, and community and are they appropriately coordinated and linked?
• Are the interventions being implemented as a package to assure that major unmet needs are filled and have a public health impact?
• What kinds of community-level approaches are being used to support the program?
• What kinds of behavior change and communication approaches are being used to support the program?
• What kinds of systems support is being provided to assure supplies, logistics, training, supervision, and supportive policies?

The findings show that the programs are at different stages of development and implementation. There is evidence that ENA facilitated changes in processes related to improved nutritional outcomes. For example, ENA strengthened the capacity of health managers and providers to deliver priority nutrition services. Nutrition policies were revised, access of families to commodities and health promoters improved, the capacity of community groups and community-based workers improved, communications about nutrition expanded to reach many different audiences, and access of families to critical information and knowledge about priority nutrition practices improved. Important lessons emerged from the early experiences of the countries about what works and how to accelerate coverage with the effective nutrition interventions. For example:

• At National Level
  - Appropriate nutrition policies can strengthen the foundation for local efforts but are not enough.
  - To achieve scale requires streamlining, explicit strategies, tracking the expansion of scale, and resources.
  - Partnerships and donor continuity are key.
  - Demystifying and defining nutrition while allowing flexibility encourages new partners to become involved and supports rapid expansion.

• At State and District Levels
  - Decentralization allows greater flexibility and innovation but adequate capacity needs to be built at district level. Basic information about nutrition is often very weak because preservice education does not include essential nutrition knowledge and skills.
  - Training centered strategies have limited impact. Ensuring adequate supplies, tools and consistent, supportive supervision/follow up are key.
  - District level support for mobilizing families to follow desired nutrition behaviors with the support of community-based opinion leaders and change agents is necessary to improve indicators.
Preventive actions should be emphasized while not rejecting curative elements, because at least initially there is an existing unmet demand in communities for addressing the needs of malnourished and sick children. Routine information systems should include basic nutrition indicators and data used to identify gaps and take action at community and peripheral health center levels.

- **At Community Level**
  - Addressing inequity is important by gender and socio-economic class; explicit actions and resources are needed.
  - Any one of the ENA interventions can serve as the entry point as long as there is a strategy for incorporating the six interventions.
  - Community involvement is essential in designing and implementing ENA.
  - Health system support is necessary to produce results. Iron and vitamin A supplementation require supply systems to the community level; infant feeding interventions and PD/Hearth require capacity building and ongoing follow-up; iodized salt requires a functioning supply and surveillance mechanism; and all interventions need to be monitored for coverage and improving wt/age indicators and the results used to take action.
  - There is usually plenty of opportunity for working with existing community structures and attempts to build new structures are time-consuming, expensive and have questionable sustainability.
  - A spirit of volunteerism and the presence of grassroots level organizations can make a big difference.
  - In certain regions, household food insecurity can undermine progress.

In the early implementation countries, the following checklist reflecting key operational components of ENA need to be completed and maintained:

- Updated policies and technical guidelines for the six interventions
- Ongoing health provider supervision and training of managers in ENA
- Pre-service curriculum for medical/nursing and nutrition schools should be strengthened and made consistent with ENA and new guidelines (e.g. HIV and infant feeding)
- Capacity built in an increasing number of community-based organizations and programs to deliver ENA interventions, until national scale is reached
- ENA indicators routinely reviewed by managers and action taken to maintain at least 80% coverage within catchment areas
- Advocacy and public education on the high cost of malnutrition and ENA behaviors maintained

New countries with high mortality and malnutrition may wish to adapt ENA for their own use. There is ample evidence in the global literature about the efficacy of the interventions that comprise the ENA. ENA interventions can be expected to improve growth, reduce mortality, improve cognition, and reduce micronutrient deficiencies. We now have some experience and the tools for rapidly expanding the scale at which these proven effective interventions can be implemented.
I. INTRODUCTION

Malnutrition, even in its milder forms, weakens the immune system and increases the likelihood of mortality from other diseases such as malaria, diarrhea, and acute respiratory infection (Pelletier et al. 1993 and 1995). Figure 1 shows the high proportion of childhood diseases attributable to underweight children. It is one of the most important public health problems in developing countries, where inadequate access to food and nutrients, inadequate care of mothers and children, inadequate health services, and unhealthy environments are common. Leading scientists link 60% of all childhood deaths to malnutrition.

![Figure 1. Relationship of Malnutrition and Infections Diseases: Fraction of Disease Attributed to Being Underweight](source: Black, et al, 2003)

There is evidence that reducing malnutrition in children and adults will also result in worker productivity gains and educational achievement (United Nations SCN 2003). Therefore the rationale for investing in the physical and mental development of children and mothers is a top priority not only for health programs but also for overall development. According to the World Health Organization (WHO), “Nutrition is a basic human need that remains unmet for vast numbers of children, who are thus unable to achieve their full genetic developmental potential”. Several Millenium Development Goals are closely linked to nutrition. Addressing child growth, maternal nutrition, and micronutrient deficiencies is an urgent need for countries committed to breaking the cycle of ill health, malnutrition, and poverty.

Child health programs at present are inadequate in their attention to a core set of proven nutrition interventions, and it is no surprise that in most regions of the world childhood malnutrition levels remain high (Figure 2). This may in part be due to a lack of understanding about nutrition interventions that work, and in part due to emerging health problems.
There is increasing concern about nutrition among some leaders who are seeing a slowing in declining child mortality levels and stagnant malnutrition levels (e.g., in Asia) or even rising malnutrition (e.g., in Sub-Saharan Africa). A recent *Lancet* article stated that “amid the plethora of new and newly validated interventions, there are signs that the child survival effort has lost its focus… efforts directed at preventing the small proportion of child deaths due to AIDS … seem … to be outstripping the efforts to save millions of children every year with a few cents’ worth of ITNs [Insecticide Treated Nets], oral rehydration therapy, or efforts to promote breastfeeding” (Jones et al. 2003). The article concludes by saying:

*There is no need to wait for new vaccines, new drugs, or new technology…the main challenge today is to transfer what we already know into action; deliver the interventions we have in hand to the children, mothers, and families who need them.*

(Jones et al. 2003 p. 6).

The six nutrition interventions of ENA are among the most cost-effective interventions we have in hand. A review by The World Bank entitled *Combating Malnutrition: A Time to Act* (Gillespie et al. 2003) summarizes recent experiences in promoting changes in policies and institutional capacities to support nutrition programs. This paper adds the operational dimension to this work by summarizing how the ENA approach has expanded coverage of proven interventions and improved nutrition practices in five countries.

To have a sustained impact on childhood morbidity and mortality, the most critical child survival interventions need to reach universal coverage, especially with strategies to cover the poor. Yet, as the third paper in a series on child survival produced by *The Lancet*\(^1\) in summer 2003 states:

*Little is known about the characteristics of delivery strategies capable of achieving and maintaining high coverage for specific interventions in various epidemiological, health system, and cultural contexts* (Bryce et al. 2003, p. 160).

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1. The Victora et al (2003) paper in this series draws attention to health and nutrition disparities among economic classes and the need for explicit strategies to address the gap.
The purpose of this paper is to examine recent experience of large-scale nutrition delivery strategies in five countries, namely Benin, India, Nigeria, Madagascar, and Senegal. Specifically, the ENA approach—which is being used in these countries to achieve and maintain high coverage for selected nutrition interventions—will be reviewed to understand what it takes to achieve success in diverse settings. The genesis and rationale for ENA are discussed; the ENA approach is described; the experience of five countries in using ENA for strengthening their focus and coverage is described; and lessons learned and conclusions about how nutrition programs can work on a large scale are presented.

The location of first generation ENA programs coincides with regions where malnutrition is most severe and most widespread (Table 1). Using the WHO Global Database on Child Growth, which covers 87% of the total population of under-5-year olds in developing countries, Deonis et al (1993) describe the worldwide distribution of protein-energy malnutrition, based on nationally representative cross-sectional data gathered between 1980 and 1992 in 79 developing countries in Africa, Asia, Latin America, and Oceania. They report that more than a third of the world’s children are affected. A total 80% of the children affected live in Asia—mainly in southern Asia—15% in Africa, and 5% in Latin America.

Table 1. Selected Demographic, Health, and Nutrition Indicators

<table>
<thead>
<tr>
<th></th>
<th>Senegal</th>
<th>Benin</th>
<th>Madagascar</th>
<th>India</th>
<th>Nigeria</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Population</strong></td>
<td>9.9 million&lt;sup&gt;1&lt;/sup&gt;</td>
<td>6.6 million&lt;sup&gt;2&lt;/sup&gt;</td>
<td>16.9 million&lt;sup&gt;1&lt;/sup&gt;</td>
<td>1049.5 million&lt;sup&gt;1&lt;/sup&gt;</td>
<td>129.9&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td><strong>Infant mortality rate</strong> (per 1000 live births)</td>
<td>68&lt;sup&gt;1&lt;/sup&gt;</td>
<td>89&lt;sup&gt;2&lt;/sup&gt;</td>
<td>88&lt;sup&gt;9&lt;/sup&gt;</td>
<td>68&lt;sup&gt;1&lt;/sup&gt;</td>
<td>100&lt;sup&gt;11&lt;/sup&gt;</td>
</tr>
<tr>
<td><strong>Under-5 mortality rate</strong> (per 1000 children &lt;5)</td>
<td>145</td>
<td>158.2&lt;sup&gt;2&lt;/sup&gt;</td>
<td>142&lt;sup&gt;9&lt;/sup&gt;</td>
<td>94.9&lt;sup&gt;10&lt;/sup&gt;</td>
<td>203&lt;sup&gt;11&lt;/sup&gt;</td>
</tr>
<tr>
<td><strong>% &lt;5 Underweight</strong> (below –2SD)</td>
<td>21.1&lt;sup&gt;3&lt;/sup&gt;</td>
<td>35 in Borgou</td>
<td>33.1&lt;sup&gt;9&lt;/sup&gt;</td>
<td>47.0&lt;sup&gt;10&lt;/sup&gt; (0-35 months)</td>
<td>42.1&lt;sup&gt;11&lt;/sup&gt; (12-23 months)</td>
</tr>
<tr>
<td><strong>% &lt;5 Stunting</strong></td>
<td>21.7&lt;sup&gt;3&lt;/sup&gt;</td>
<td>27 &lt;3 years&lt;sup&gt;4&lt;/sup&gt;</td>
<td>48.6&lt;sup&gt;9&lt;/sup&gt;</td>
<td>45.5&lt;sup&gt;10&lt;/sup&gt; (0-35 months)</td>
<td>49.7&lt;sup&gt;11&lt;/sup&gt; (12-23 months)</td>
</tr>
<tr>
<td><strong>% &lt;5 Wasting</strong></td>
<td>8.7&lt;sup&gt;3&lt;/sup&gt;</td>
<td></td>
<td>15.5&lt;sup&gt;10&lt;/sup&gt; (0-35 months)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Exclusive breastfeeding &lt;6 months</strong></td>
<td>52 %&lt;sup&gt;5&lt;/sup&gt;</td>
<td>38 %&lt;sup&gt;4&lt;/sup&gt;</td>
<td>41.3&lt;sup&gt;9&lt;/sup&gt;</td>
<td>19.4&lt;sup&gt;10&lt;/sup&gt;</td>
<td>8.7&lt;sup&gt;11&lt;/sup&gt;</td>
</tr>
<tr>
<td><strong>Vitamin A coverage</strong> (6-59 months)</td>
<td>91 %&lt;sup&gt;6&lt;/sup&gt;</td>
<td>95 %&lt;sup&gt;8&lt;/sup&gt;</td>
<td>23.5&lt;sup&gt;9&lt;/sup&gt;</td>
<td>28.4&lt;sup&gt;10&lt;/sup&gt; (12-23 month olds who have had 1 dose)</td>
<td>66.3&lt;sup&gt;11&lt;/sup&gt;</td>
</tr>
<tr>
<td><strong>Use of iodized salt</strong></td>
<td>31 %&lt;sup&gt;7&lt;/sup&gt;</td>
<td>87 %&lt;sup&gt;4&lt;/sup&gt;</td>
<td>76&lt;sup&gt;9&lt;/sup&gt;</td>
<td>81.6&lt;sup&gt;10&lt;/sup&gt;</td>
<td>97.2&lt;sup&gt;11&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

II. ESSENTIAL NUTRITION ACTIONS (ENA) FRAMEWORK

What is ENA?

ENA is a strategy or approach to expand the coverage of six affordable and proven nutrition interventions through actions at health facilities, in communities, and through communications channels. The six technical interventions are:

- Adequate intake of iodine by all members of the household.
- Exclusive breastfeeding (EBF) for six months;
- Adequate complementary feeding (CF) from about 6–24 months with continued BF for at least two years;
- Appropriate nutritional care of sick and severely malnourished children;
- Adequate intake of vitamin A for women and children; and
- Adequate intake of iron for women and children.

The criteria for their selection include evidence of efficacy and effectiveness in multiple regions and countries, and evidence of feasibility and affordability/cost-effectiveness (Sanghvi and Murray 1997). The ENA approach aims to reach at least 80% coverage at national or sub-national scale. It emphasizes contacts at six critical stages in the lifecycle to deliver the above interventions so that growth and micronutrient status of children and women improve. To have an impact, frequent contact is necessary during the following critical periods:

- Pregnancy
- Delivery and first week postpartum
- First six months
- Six to 24 months
- Young children during and just after illness
- Adolescence and youth (for sustained impact)

This timing is critical since these periods represent the most vulnerable and also when malnutrition can be effectively addressed. Growth failure in children is concentrated within the first two years of life in all regions of the world (Figure 3). In South Asian countries, at least a third of children are malnourished at birth (ACC/SCN 2000). Reduction in child malnutrition, therefore, depends on interventions started before or during fetal development and infancy. Women, particularly women who are pregnant or breastfeeding (BF), and children less than two years of age are the primary focus of ENA. To address the “vicious cycle” ENA integrates health interventions with nutrition and emphasizes extra feeding and care following each illness episode and maintaining feeding during illnesses.
Figure 3. Age-wise Decline in Nutrition

Based on evidence regarding the costs and difficulties of rehabilitating severely malnourished children, ENA interventions concentrate on prevention. Five of the six ENA interventions have a prevention focus. Considering the difficulties in high malnutrition and mortality populations of accessing the formal health services, ENA emphasizes community-level actions but with strong links to the health system. The health system itself needs strengthening in nutrition components with large missed opportunities in health services. Pregnant women and mothers of children under two years frequently do not receive the essential nutrition messages and services when they come for antenatal care, delivery and postpartum care, immunizations, well-baby clinics or family planning. The ENA approach emphasizes the importance of nutrition counseling and provision of critical services during encounters between health workers with pregnant women and mothers of children under two years old, particularly at the community level.

The ENA approach does not assume that inadequate nutrition is only a knowledge problem with families. It recognizes that household food insecurity, inadequate care/societal support for women and young children, and poor health care access/unhealthy environments can be exacerbating or underlying causes of poor feeding practices and other nutritional problems. If they cannot be directly addressed in a permanent manner, the approach encourages ongoing advocacy on these issues while moving forward with near-term solutions. The basis for this urgency comes from the recognition that good nutrition is an input for social and economic development as well as an outcome, and aggressively addressing malnutrition will contribute to resolving the underlying problems.

In high-malnutrition areas, young children consistently have been found to be fed inappropriately. In some instances, they come from severely food-insecure households, without good sanitation or access to safe water, and there may be a broader environment of poor caring practices for women and young children. For lasting improvements in nutrition, these factors need to be addressed. For example, women from poor households may not have sufficient time to feed their one-year-old child appropriately—food security affecting caring capacity. ENA encourages the design of interventions for young child feeding to be based on a systematic
exploration of household constraints using, for example, formative research such as Trials of Improved Practices (Griffiths et al. 2004).

The ENA delivery strategies and main lines of work for achieving high coverage are as follows:

- **Integrating nutrition into health services and systems strengthening.** This involves specifying what specific actions health providers must take while carrying out ANC, delivery, immunization, family planning and case management. It also involves assuring the availability and use of supplies (e.g., micronutrient supplements and/or fortified foods), using data for tracking progress and identifying and solving problems, improving health provider performance, and building an enabling policy environment.

- **Capacity building and mobilization in communities** in areas such as strengthening women’s groups; recruiting and supporting neighborhood Change Agents (CAs) and animators to promote increased participation in health services and practice of desired behaviors; increasing participation of marginalized groups through social mapping of dispersed families, special outreach and recruitment of change agents from small villages and hamlets; building capacity through community-based workers of appropriate home care of sick and malnourished children and appropriate care-seeking; and engaging community leaders through sensitization and use of monitoring data and demonstration (e.g., PD/Hearth) to motivate action.

- **Multi-channel, ongoing communications** to reach key audience groups with information about priority behaviors and services and why they are important. Clarity in messages about who should do what and why for not more than 3-5 feasible, do-able, and acceptable behaviors at a time, combined with sufficient intensity and repetition through different media; improving communication skills among front line providers, and supportive problem-solving communication by supervisors are important; evidence-based advocacy timed to influence resource allocation and decision-points in policy development are examples.

ENA emphasizes that, in most countries, existing program platforms can be strengthened to deliver the priority interventions. Examples of the multitude of program platforms that exist in many countries include women’s and youth groups; community and clinic-based health workers in the public and private sectors; agricultural extension and rural credit programs; traditional and new community networks; processed foods industry for food fortification; growth monitoring and promotion activities; pre-service and in-service training of health and other sector workers and managers; advocacy and awareness-raising events; and primary health care monitoring and information systems.

**Why is there a need for ENA?**

Over the past 30 to 40 years, our understanding of the nature and causes of malnutrition improved considerably. Although the pathways and determinants of malnutrition have been clarified (UNICEF Conceptual Framework in 2000), implementation has lagged behind the science of interventions,\(^2\) for example:

\(^2\) A series of cost and cost-effectiveness studies conducted during 1992-1998 (Sanghvi et al. 1998) on micronutrient programs and during 1992 to 1995 in Latin America on the use of food and cash subsidies for achieving health and education sector goals, breastfeeding programs, iron and vitamin A programs (Sanghvi et al. 1995) highlighted a number of implementation issues in ongoing nutrition programs. Assessments using the ENA checklist in Madagascar, Zambia, Senegal, and Benin in 1997-1998
Nutrition interventions were often designed and implemented as separate vertical programs, not integrated with health services, and often in competition with one another. In Nepal, the vitamin A program achieved sustained high coverage and is thought to have accelerated the recent decline in child mortality. However, underweight and stunting levels are among the worst in the world and there has been little emphasis on improving infant feeding practices or iron deficiency.

The interventions were often displaced by diagnostics (e.g., community analysis and assessment, weight monitoring and anemia detection) with little or no follow-up. International donors invested in growth monitoring and surveillance, and community analysis activities that focused on problem identification but not on preventive actions; anemia control was frequently limited to testing hemoglobin levels with little or no follow-up.

Many countries invested their limited nutrition funds in rehabilitating severely malnourished children but did not see lasting improvements. Rehabilitation units for the severely malnourished at hospitals and sometimes peripheral health facilities accounted for the main focus of national nutrition programs.

Little importance was given to younger age groups when malnutrition starts accelerating and can be more effectively prevented. Most countries identified all under-fives and pregnant and lactating women as their primary target groups. This large number of children and women proved difficult to provide adequate attention to. Activities such as home follow-up and individualized counseling in infant feeding were not feasible. Those who came to health facilities for services were often the under 6 month olds (easier to carry and who needed immunizations) or 3-5 year olds (able to walk), missing the group experiencing the most rapid acceleration of malnutrition (6-23 months).

Maternal nutrition received relatively little attention, ignoring that the foundation of an individual’s nutrition for life is mostly laid before he/she is born. Evidence showed that in areas with high levels of maternal undernutrition, intervening during pregnancy was effective (ACC/SCN 2000).

The causal model for malnutrition (UNICEF 2000) involves a complex web of underlying multisectoral factors and many had the impression that addressing malnutrition was impossible. Multisectoral Nutrition Planning gained momentum in the ‘60s and ‘70s but did not result in effective programs. What appeared to be missing is a clear definition of a core set of interventions and operational guidelines for implementing them.

The result of ineffective implementation was that there are currently huge gaps in coverage with the six proven effective, essential nutrition actions (Figure 4). The ENA approach is designed to work as an analytic process and implementing strategy to fill the unmet needs in nutrition.

Figure 4 shows the weighted average of current levels of six key ENA indicators in developing countries. The weight for age indicator is a proxy for appropriate complimentary feeding. Countries included in the figure were selected from the 42 countries with the highest numbers of child deaths, as identified in Black et al, 2003. Countries with sufficient and available DHS data (1998 to 2002) for the key indicators were included: India, Tanzania, Uganda, Mali, Malawi, Zambia, Nepal, Egypt, Cambodia, and Rwanda. Data for iodized salt were not available for

(Sanghvi et al. 1997 and 1998) highlighted challenges for nutrition programming in the Africa region. The conclusions from these various analyses of operational factors contributed substantially to the design and development of ENA in 1998-2003.
Nepal and Tanzania. The data for vitamin A supplementation in Egypt are for children 12-23 months rather than 6-59.

**Figure 4. Unmet Need for Essential Nutrition Actions**

**As an Analytic Process**

ENA provides the tools to examine current program status and past experience. Country lessons from this analysis provide valuable input for strengthening future country programs. The six interventions of ENA are not new; most countries have attempted implementing each of the six interventions at some time. Understanding why efforts have or have not been effective in the past and where viable platforms and organizations exist in the country to delivery of ENA, are important first steps. Better ways of reaching priority age groups may already exist but are not well-utilized for nutrition. The key questions in this analytic process are as follows:

- What are the strengths and weaknesses in the way in which the six interventions have been implemented in the country? How well have systems strengthening, community capacity building and mobilization, and communications components worked, why and why not?
- Where should the next investments be made for maximum acceleration in coverage, and what inputs are most critical?
- How do current operations need to be modified, what new program channels need to be opened, and who needs to be motivated/empowered and how?
The analytic process is best conducted in partnership with key stakeholders who have the most ownership of and authority over the three components for delivery of ENA in a given country (systems strengthening, community capacity building and mobilization, and communications). The analytic process is designed to be a systematic, streamlined, and motivating process, rather than a punitive evaluation effort oriented toward finding faults. A specific tool, the “checklist” for ENA was specially developed to facilitate this process (Sanghvi et al. 2003).

**As a Program Approach**

The first step in operationalizing ENA was to prioritize and simplify the operational strategy to rapidly expand coverage with the core set of interventions. But obtaining agreement on the minimum package of interventions did not by itself move the programming forward. Field teams in Madagascar, Benin, and Senegal, where ENA was first implemented demanded practical tools for various steps that would help operationalize the expanded coverage of the six interventions. A systematic search for tools and guidelines already in existence (e.g., materials related to the Baby Friendly Hospital Initiative (BFHI), iodization of salt) and identification and filling of gaps for tools that did not exist (e.g., iron supplementation, vitamin A supplementation with NIDs, infant feeding guidelines and counseling tools) followed. The monograph *Nutrition Essentials*, a joint publication of BASICS, UNICEF and WHO staff and financed by USAID, summarized the operational elements for the six interventions. Additional tools continued to emerge as country teams expanded implementation. For example, the use of PD/Hearth as the community-based approach for care given to malnourished children (Wollinka et al. 1997) was first introduced as part of ENA in Senegal in 2002 (Diene et al. 2004) and Nigeria in 2003 (Seumo, Aminu et al. 2004).

The approach is based on these key principles:

- Form partnerships to achieve national scale; adapt operational components to local needs. Some interventions and program components may need to be phased in more gradually than others.
- Plan a strategy and actions for reaching at least 80% coverage within geographic areas, with each of the six priority interventions.
- Concentrate resources on children under two years old and pregnant women.
- Take care of prevention first; note that five of the six ENA interventions are preventive.
- Develop special outreach and communications for marginalized groups; plan local strategies to reach them and track their progress. Engage community leaders.
- Maintain/increase frequency of family contacts during pregnancy through two years of age by trained providers and change agents, tailored to the needs of age groups and intervention protocols.
- Streamline tools and frameworks. Scale can only be reached through working with many different partner groups and the approach needs to be simple and doable for diverse organizations.
- In some cases it may be prudent to start with the simplest interventions with highest uptake first (e.g., breastfeeding and vitamin A supplementation), but advocate and plan for the six
interventions up front and invest in strengthening community platforms and health (and where necessary food) systems to deliver or support the full package.

- Use tools that provide clear action-oriented guidance on “who should do what, when, how, and why.” Make sure that recommended behaviors are simple and doable. Adapt materials to local settings. Take the time to pre-test materials and make the needed changes. Reflect the perceptions and motivations of key audiences.

- Be prepared for conducting ongoing advocacy and sensitization over several years. It takes time to make sustainable changes, and nutrition problems are less visible than other health problems.

- Emphasize the linking actions between improving infant and child feeding and assuring adequate intake of micronutrients, as well as between nutrition interventions and primary health care services. Household food security will need attention in an estimated 5–20% of households on average, maybe more in some settings.

What are the tools for implementing ENA?

Implementing ENA involves several steps (see Box 1). In the past five years, country teams and headquarters staff of WHO, UNICEF, the Pan American Health Organization (PAHO), the World Bank, non-governmental organizations (NGOs), Ministries of Health, USAID projects (e.g., BASICS II and LINKAGES) developed tools to facilitate implementation of ENA. Of these, examples of tools used in the subject countries are listed below. These tools reflect the particular needs of each technical intervention or country program. Some tools were developed as generic guidelines or manuals to be used as is or excerpted and otherwise modified. An ENA Toolkit and CD-ROM containing copies of the tools are available from BASICS II. The tools can be divided into five categories:

- Advocacy
- Assessments
- Health Services Integration and Quality
- Community Actions
- Communications and Information-Education-Communication (IEC)

Advocacy

Among health policy-makers, managers, and providers and in the general public, improving awareness, knowledge, and skills on the nutrition problem and interventions is an ongoing need for programs. Malnutrition is invisible, few key persons know that sub-clinical forms of malnutrition have serious impacts, and pre-service preparation of health providers and managers in nutrition is almost absent. The following tools are among the most widely used:

- Malnutrition and Child Mortality: Program Implications of New Evidence (Paper)
- Improving Child Health through Nutrition: The Nutrition Minimum Package (Paper)
- PROFILES3 Advocacy Tools
- Nigeria: Advocacy Materials for Community Leaders

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3 PROFILES, the model is available from AED (Academy for Educational Development), is a computer model that quantifies the developmental benefits per unit cost of program investment in essential nutrition actions.
**Box 1. ENA IMPLEMENTATION**

1. **PREPARATION**
   1.1 Assess the current status of activities: define coverage that can be achieved through existing delivery strategies, and what additional “special” actions/partners are needed.
   1.2 Develop a prioritized action plan for state/district managers.
   1.3 Conduct advocacy, develop working groups, form agreements with key partners in governmental and NGOs to achieve nationwide scale.
   1.4 Revise and update policies, guidelines, and operational tools such as recording forms/health cards, supervisory checklists, training materials, job aids, and IEC materials.
   1.5 Prepare a comprehensive multi-channel communications strategy with a focus on raising awareness and motivation on topics such as “hidden dangers” of malnutrition, optimum infant feeding practices, compliance with iron/folate protocols, mother’s diet, and care of the sick or malnourished child.

2. **IMPLEMENTATION**
   2.1 Within districts, establish partnerships with existing community organizations and community-based structures from different sectors. Work outside the health sector and with the media.
   2.2 Hold national, regional, and/or district orientation meetings with key implementing partners. Define roles, targets, and continue monitoring progress in ENA indicators.
   2.3 Orient/train district staff at all levels in health, education, and agriculture; train health managers and providers in the use of job aids and tools.
   2.4 Launch community actions and communication for behavior change (CBC) activities; track their implementation and uptake.

3. **ASSURING SUPPLIES**
   3.1 Review and integrate ENA supplies in routine health procurement and distribution systems (e.g., vitamin A with immunization, vitamin A and iron with the Bamako Initiative, iron and vitamin A with safe motherhood, Integrated Management of Childhood Illness (IMCI), and revolving funds/user fee initiatives).
   3.2 Monitor availability and use; if necessary, supplement with additional supply channels to enable reaching high coverage.
   3.3 Assure financing for ENA supplies through cost recovery and/or “essential drugs” lists.

4. **TRAINING/FOLLOW UP**
   4.1 Training alone is usually ineffective to improve service quality. Plan for and fund post-training follow-up, use of data, and feedback.
   4.2 Hold monthly/quarterly meetings at operational levels for problem solving and to recognize good work based on local data.
   4.3 Incorporate innovations in the form of small, incremental changes introduced through routine supervision and meetings.
   4.4 Listen to front-line providers and change agents and help remove barriers to good performance.

5. **USE OF DATA**
   5.1 Take baselines on coverage and key behaviors at the health facility, community, and household levels, and design/adapt a system for recording/reviewing results.
   5.2 Use routine data on prenatal and well- and sick-child counseling, growth monitoring, vitamin A supplementation, iron/folic acid (IFA) supplementation, and iodized salt testing. Advocate for improved indicators and use of data by managers and providers.
   5.3 With the help of data and process documentation, refocus delivery strategies, revise detailed action plans, and adapt operational guidelines for achieving at least 80% coverage with each of the six interventions.

6. **SECURING RESOURCES**
   6.1 ENA funding should be secured for at least three to five years initially.
   6.2 Use evidence of results from early implementation sites to advocate for resources and build sustainability for the long term. ENA is not costly but requires ongoing leadership and focus.
   6.3 Build long-term strategies along-side rapid impact activities to sustain program services (e.g., through introducing ENA in pre-service curriculum).
**Assessments**

Assessments are used to identify constraints and to elicit best practices for expanded application. The results also provide a baseline for managers to monitor progress. Some assessment tools help with designing effective CBC activities through a better understanding of household level motivations and barriers to behavior change. Assessing the costs of the interventions has proved helpful for advocacy and for identifying potential areas for reducing costs or increasing outputs.

- Program Review of Essential Nutrition Actions—Checklist for District Health Services
- Designing by Dialogue: A Program Planner’s Guide to Consultative Research for Improving Young Child Feeding
- The Economic Analysis of Nutrition Projects. Guidelines for Cost-Effectiveness Analysis

**Integrating ENA in Health Services**

Several tools were developed to fill the large gap in health services for nutrition interventions. Pulling together widely dispersed information about the six interventions in a single volume— *Nutrition Essentials*—and identifying what specific actions health managers could take within the context of antenatal and delivery care, preventive health care, and case management was found to be useful. However the key actions for health providers needed to be turned into simple job aids and training curricula. This exercise highlighted the absence of useful materials on complementary feeding and iron interventions, and these gaps were recently filled through guidelines and tools developed by various donor agencies.

- Nutrition Essentials—A Guide for Health Managers
- The Essential Nutrition Actions Approach to Improve the Nutrition of Women and Children in Africa: A Five-Day Training Guide for Planners
- Job Aids:
  - Reminder checklists for health providers to deliver ENA with MCH services
  - Senegal *Paquet d’Activités Intégrés de Nutrition* (Package of Integrated Nutrition Activities [PAIN]) flipbook: Reminders for health workers
  - ENA Job Aids for regions with high and low HIV prevalence
  - Supplies list for ENA
- HIV and Infant Feeding an Overview (PowerPoint Presentation)
- ENA Training Modules on Nutrition During Crisis
- Post-Training Follow-Up (*Activités de Suivi Post Formation Intégré* [ASPI]) Guidelines
- Guiding Principles for Complementary Feeding of the Breastfed Child
- Iron Deficiency – What Works
- How to Strengthen Vitamin A Supplementation:
  - Proceedings of the Africa Regional Workshop (MOST and BASICS II)
  - Adding Vitamin A to National Immunization Days (NIDs)

**Community Actions**

Within the health sector, nutrition program implementers have a long history of community-based activities. But only a handful of programs have gone to scale. These tools have been used in the design, implementation, and evaluation of community-level components of ENA programs:
• Best Practices and Lessons Learned for Sustainable Community Nutrition Programming (Paper)
• Community Health Worker Incentives and Disincentives: How They Affect Motivation, Retention, and Sustainability (Paper)
• Training modules for community workers from CARE/India’s INHP II (Integrated Nutrition and Health Project)
• The Missing Piece: Video on Essential Nutrition Actions to Improve Maternal and Child Health in Madagascar
• Finding Community-Based Solutions to Malnutrition: Video on Positive Deviants/Hearth Model (PD/Hearth)
• Mother Support Groups: A Review of Experience in Developing Countries (Paper)
• Nigeria’s Community-Based Approach to Child Survival: Catchment Area Planning and Action: Module 2
• ENA Training Modules for Members of Women's groups in Madagascar

**Communications and IEC**

The success of six ENA interventions depends substantially on how effectively families can be motivated to practice the desired behaviors. These tools were used to design or implement large-scale communications activities to reinforce health systems strengthening and community-level actions:

• Emphasis Behaviors in Maternal and Child Health (Paper)
• Operationalizing Key Family Practices for Child Health and Nutrition at Scale
• Madagascar: The Six Principles of Community Mobilization (Video)
• India: Behavior Matrix for an Integrated Nutrition and Health Project (CARE/INHP II)
• Examples of Madagascar Home Booklet and Counseling Cards, Animators Booklet (Malagasy)
• Examples of Senegal Counseling Cards (French)
• Examples of El Salvador and Honduras Counseling Cards (Spanish)
• Examples of CARE/India’s Counseling Guide, Flipchart, Cards (English), Change Agents’ Booklet (Hindi)
III. CASE STUDIES IN THE APPLICATION OF ESSENTIAL NUTRITION ACTIONS

The country programs described in this paper are quite diverse, in part because the epidemiological settings are varied and also because the ENA framework encourages building on existing program platforms and delivery strategies for each of the six essential actions to reach the goal of high coverage and scale. Table 1 summarizes selected health indicators; the program contexts varied among countries. In Benin, health workers in peripheral health facilities built links with community agents. In Nigeria the village leadership and community-based organizations (CBOs) formed a committee facilitated by health staff. In Madagascar, women’s groups and volunteers were mobilized in large numbers by health staff. In Senegal, community health workers (relais) linked to health posts were the backbone of ENA programs. In India, ENA is mobilized through CARE/India’s INHP II, which works closely with the ICDS (Integrated Child Health Services) and RCH (Reproductive and Child Health) programs of the government.

Figure 5 on the next page shows the main operational elements of ENA and their pathway to improved nutrition and reduced child mortality. Each country program was able to measure indicators related to ENA operational elements, processes, and selected outcomes as part of their monitoring and evaluation activities. None of the programs collected impact data, because they used the limited resources for interventions and the global literature has already established causal links between behavior change and coverage and impacts in terms of biological indicators. Evidence for the health impact of ENA interventions is extensive, for example, for improving weight or height for age (Caulfield et al. 1999; Mackintosh et al. 2003; Santos et al. 2001), vitamin A status (Arroyave et al. 1981; Bloem et al. 1995), anemia (Allen 2002; Stoltzfus 2001), child mortality (Ching et al. 2000; Pelletier et al. 1993, 1995) and morbidity (Popkin et al. 1990; Victora et al. 1989).

This section presents examples of outcomes related to program coverage and behavior change for the ENA interventions in five large-scale programs. As seen in Figure 5, a range of policy and program interventions will affect various intermediate processes that influence behaviors. These determinants will result in more people doing the essential nutrition actions, which results in improved nutritional status, reduced morbidity and disability, and reduced mortality. All of the country programs had data on the interventions themselves. Some, but not all, also had data on the intermediate processes, the coverage and behaviors related to ENA, and nutritional status. Some programs compared indicators in programs with those in non-program areas. Others measured the indicators in the program area over time.

These programs and their assessments were not designed as research studies and, hence, there is considerable variation in the types of data available. Program evaluations conducted for each program also did not involve measurement of nutritional status. The exception is CARE/India’s INHP II that is engaged in an evaluation research activity with the Johns Hopkins University to assess nutritional status outcomes, including anemia.

The remainder of this section describes each country’s use of the ENA approach. The final section draws lessons from across the five programs.

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4 This section is based primarily on country summary papers written by BASICS II staff and consultants. See References.
Figure 5. Essential Nutrition Actions: Operationalizing Nutrition Interventions to Reduce Mortality

**Behaviors Related to Essential Nutrition Actions**

- **Exclusive breastfeeding** for six months;
- **Adequate complementary feeding** starting at six months with continued breastfeeding for two years;
- Appropriate nutritional **care of sick and malnourished** children;
- Adequate intake of **vitamin A** for women and children;
- Adequate intake of **iron** for women and children; and
- Adequate intake of **iodine** by all members of the household.

* In areas of high prevalence of maternal malnutrition, also women’s nutrition

**Interventions**

- Leadership, Resources, Policy, and Guidelines
- Add nutritional actions to existing health contacts
- Work with community-based organizations and networks from all sectors to introduce actions
- Reinforce and expand demand for services through communications, public awareness and IEC
- Strengthen health systems support to meet demand for services

**Intermediate Effects Influencing Behavior/Coverage**

- Health worker knowledge and skills
- Caretaker knowledge and skills
- Social norms
- Health services access
- Food and micronutrient supplies access

**Reduced Mortality (<5) from:**
- Diarrhea
- Pneumonia
- Malaria
- Measles
- Neonatal
- Other

**Child Nutritional Status**

- Weight for age
- Vitamin A
- Iron
- Iodine
SENEGAL

Senegal is a West African country with a population of 9.5 million. Nationally, an estimated 40% of under-five deaths are related to malnutrition. Of these, 90% are associated with mild and moderate forms of malnutrition. From 1986 to 1996, the prevalence of child malnutrition increased in Senegal. The deterioration was more serious in rural areas, further exacerbating rural/urban disparities. Although there was a positive trend in EBF in the early 1990s, actual levels remained low, particularly EBF after the first one to two months. Specific deficiencies such as iron deficiency anemia, iodine, and vitamin A were serious public health problems. There was a national law and policy for universal salt iodization in Senegal, but IDD (Iodine Deficiency Disorders) was a widespread problem. Use of crude uniodized salt remained a problem in some regions.

The Programmatic Context

In 2000, the MOH adopted a new “minimum package” of nutritional interventions or ENA approach for scaling up of a selected group of proven essential nutrition interventions through health services. The ENA in Senegal is Paquet d’Activités Intégrés de Nutrition, which began in 1997 with implementation initially in 15 districts in three regions (Fatick, Kaolack, and Louga). This program is currently implemented in seven regions with a population of about 5 million. Overall, the Paquet d’Activités Intégrés de Nutrition approach was adopted to ensure the systematic implementation of the ENA within the national health care system so that it would unify various fragmented nutrition programs (e.g., Baby-Friendly Hospital Initiatives), reallocate resources to preventive actions, organize a comprehensive approach to nutrition problems, and integrate well with other health interventions. The initial focus of ENA was to decrease missed opportunities during interactions between mothers and health care providers at health facilities and during community weighing sessions. It now includes a proactive, biannual vitamin A supplementation program; a community-based rehabilitation of severe malnutrition (PD/Hearth) component; closer integration with health interventions, such as care-seeking and newborn care; and an innovative post-training follow-up that strengthens the health services/community link and expands coverage to under-served areas. See Table 2 for a comparison of nutrition programs in Senegal before and after the introduction of ENA.

ENA Facilitators and Activities

The MOH is the prime mover of ENA in the country, and health staff at district and health post levels are its main managers. The strategy emphasizes the integration of relevant nutrition interventions at six critical health care contacts in health facilities: prenatal, delivery, postpartum, immunizations, growth monitoring, and sick-child visits. Training of community-based workers or relais in community-based growth promotion is accompanied by messages on the six ENA interventions. The relais are now being linked to volunteer resource persons selected in outlying communities to reduce the exclusion of marginal communities. The relais and health post staff are visited once or twice per quarter for problem-solving and feedback on indications.

The program focuses on younger-age children. Through Behavior Change Communication/Information-Education-Communication (BCC/IEC) activities, the program supports the practice of key household behaviors from pregnancy through the first two years of
### Table 2. Shift in Focus after the Introduction of ENA in Senegal

<table>
<thead>
<tr>
<th>Program Area</th>
<th>Focus Before</th>
<th>Focus Now</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target age group for interventions</td>
<td>Under 5 years</td>
<td>Under 3 years</td>
</tr>
<tr>
<td>Impact indicators</td>
<td>-3 and –2 z score weight/age</td>
<td>% children that gained weight</td>
</tr>
<tr>
<td></td>
<td></td>
<td>% children EBF for 6 months</td>
</tr>
<tr>
<td></td>
<td></td>
<td>% children receiving appropriate complementary feeding (ACF)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>% children 6–59 months that received 2 doses of vitamin A annually</td>
</tr>
<tr>
<td></td>
<td></td>
<td>% pregnant women consuming appropriate IFA supplements</td>
</tr>
<tr>
<td></td>
<td></td>
<td>% household consuming iodized salt</td>
</tr>
<tr>
<td>Intervention focus</td>
<td>Growth Monitoring</td>
<td>EBF for 6 months</td>
</tr>
<tr>
<td></td>
<td>Nutrition rehabilitation at health centers</td>
<td>ACF</td>
</tr>
<tr>
<td></td>
<td>Food supplementary</td>
<td>Vitamin A supplements for women and children (and dietary diversity)</td>
</tr>
<tr>
<td></td>
<td>Food distribution</td>
<td>IFA supplements for pregnant women</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Consumption of iodized salt</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nutritional management of sick and malnourished children using PD/Hearth in the community</td>
</tr>
<tr>
<td>Approach</td>
<td>Mainly curative with rehabilitation units run by MOH and a few NGOs</td>
<td>MOH and all partners working in nutrition are using ENA (PAIN) as national strategy to prevent malnutrition through a) Harmonized IEC and training materials across multiple implementing agencies</td>
</tr>
<tr>
<td></td>
<td>BFHI for breastfeeding promotion</td>
<td>b) Integrated strategies for communication and social mobilization including job aids and monitoring tools using nutrition and health</td>
</tr>
<tr>
<td></td>
<td>IFA supplements</td>
<td>c) Updated norms and protocols regarding EBF (for 6 months) vitamin A for post-partum women</td>
</tr>
<tr>
<td></td>
<td></td>
<td>d) Non-medical personnel, e.g. Community relays involved in vitamin A and IFA distribution, iodized salt testing, growth promotion</td>
</tr>
<tr>
<td>Priority activities</td>
<td>MOH Nutrition Rehabilitation Units linked with Oral Rehydration (ORT) Unit</td>
<td>District action plans for strengthening and expanding PAIN + (combined PAIN/Community-IMCI)</td>
</tr>
<tr>
<td></td>
<td>Weighing children during immunization contacts</td>
<td>Strengthened capacity of health workers, volunteers, and community relays in PAIN + with emphasis on promoting adoption of key behaviors (not solely dependant on monthly weighing sessions)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Integrated follow-up of trained staff. Supervision plan for health and nutrition program focused on ACF and feeding during and after illness</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Multi-media, multi channel communication and social mobilization focused on infant feeding (breastfeeding, ACF, and feeding during and after illness) and adequate micronutrient consumption</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Community-based approaches to nutrition rehabilitation using PD/Hearth model</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Advocacy using PROFILES</td>
</tr>
</tbody>
</table>
age with an emphasis on infant feeding, vitamin A, and use of iodized salt and iron supplements. The program has helped improve national protocols for infant feeding practices, particularly enabling mothers to exclusively breastfeed starting immediately after delivery; appropriate complementary feeding from about 6–24 months; and assuring universal coverage with vitamin A supplements and iron. Coordination is strengthened by other health interventions such as neonatal health, immunization, IMCI, and maternal health. Key nutrition supplies have been included in the Bamako Initiative program for cost recovery. The PD/Hearth approach has been introduced to address the needs of severely malnourished children, to reinforce community ownership, and to reduce the costs of rehabilitation sites in health facilities. Six-month vitamin A supplementation has replaced NIDs-linked vitamin A distribution. The MOH has introduced key ENA indicators their routine monitoring and evaluation mechanisms.

Changes in Processes and Delivery Systems

From 1997 to the present, the following changes in priority ENA-related programs were observed:

- **Updated nutrition protocols integrated into health policies**
  - Policy on duration of EBF and initiation of CF revised to six months.
  - Lactation Amenorrhea Method (LAM) fully integrated as part of family planning.
  - Adoption of 1997 WHO vitamin A supplementation recommendations and integration of vitamin A supplements as part of the Bamako Initiative.
  - *Paquet d’Activités Intégrés de Nutrition* adopted as a national strategy and incorporated into the national nutrition policy.
  - Advocacy successful in allocation of increased national resources for nutrition, with use of PROFILES as a part of the advocacy strategy.

- **Technical nutrition guidelines developed**
  - Standardized protocol for iron supplements for pregnant women and deworming developed.
  - Adapted the IMCI feeding recommendations based on formative research.
  - Nutritional norms and protocols aligned with the new national policy.

- **Access and quality of nutrition services improved**
  - Foods rich in vitamin A promoted nationwide; problems related to the supply of vitamin A supplements addressed.
  - Nonmedical, community agents allowed to distribute vitamin A supplements, which achieved a higher coverage rate and allowed health workers to perform other tasks.
  - During an evaluation in 2000, iron was available in all 27 health facilities visited, and vitamin A was available in more than 90% of them. Before *Paquet d’Activités Intégrés de Nutrition*, vitamin A was not available in most facilities.
  - Almost 1,000 facility-based health staff received training in management and ENA.
  - Iron supplements were starting to be provided by Traditional Birth Attendants (TBAs) to women; previously, only trained health clinic staff were allowed to dispense iron supplements.
  - Worked with small producers of iodized salt to ensure countrywide availability and gave testing kits to community groups.
  - The Baby-Friendly Hospital Initiative was expanded to health centers where more births occur.
• **Scale of activities increased**
  - The ENA package was initially integrated into primary health care services in 2 health centers and 8 health posts in 2 districts and later expanded to 15 districts; *Paquet d’Activités Intégrés de Nutrition* now operates with BASICS II support in 21 districts of Senegal. More than a dozen of additional district are being covered by the MOH, which is working with other partners for nationwide scale-up.
  - By the end of BASICS I in 1998, *Paquet d’Activités Intégrés de Nutrition* covered 81% of Kaolack, 57% of Fatick, and 39% of Louga regions. Now it is estimated to be about 77% in all the regions covered.
  - Developed broad partnerships, including a Senegalese Nutrition Network (RESIN). These partnerships allowed rapid expansion into other districts.
  - The World Bank-assisted Poverty Reduction and Nutrition (PRN) program adopted the *Paquet d’Activités Intégrés de Nutrition* approach and tools, thereby expanding coverage.
  - Nationwide coverage with vitamin A supplementation, BF promotion activities, salt iodization, and prenatal iron was provided. BF and CF were strengthened in the curriculum in professional schools, assuring ongoing strengthening of services and expanded coverage since graduates from these institutions serve in health programs nationally.
  - *Paquet d’Activités Intégrés de Nutrition* approach and tools were adopted and used by national NGO networks.

• **Now working with community-based organizations and networks from all sectors**
  - Training was completed of more than 4,500 community health workers on *Paquet d’Activités Intégrés de Nutrition*, care-seeking, and home management of diarrhea. Activities were scaled up in 21 districts. An integrated ASPI approach has been designed and implemented to increase contacts with frontline community workers after training.
  - Developed training, supervisory, and counseling support to community support groups.
  - Iodized salt testing, promotion of immunizations, diarrhea management, and work with prevention of malaria (use of ITNs) are examples of community-based interventions having important nutrition payoffs linked with ENA.
  - Coverage data from 2001 showed that the percentage of children under three years old weighed each month was 0% in non implementation zones and 40% in the best program sites. Availability of weighing scales kept coverage low.

• **Reinforced and expanded communications, public awareness, and IEC**
  - Comprehensive IEC strategy implemented on BF and CF, vitamin A rich foods, feeding during illness, and the nutrition of pregnant and lactating women.
  - IEC tools include counseling cards, posters, *aide memoires* for the health agents, integrated health card, radio spots, audiocassettes, a radio series, five plays, one song, and two poems. Uptake and use of IEC tools with consistent messages about six key behaviors in nutrition by other partner organizations such as the Red Cross, World Vision, CCF (Christian Children’s Fund), Canah, AFRICARE, PRN/World Bank, and UNICEF.

**Changes in Knowledge and Practice at the Household Level**

• A study in 1999–2000 showed the following practices among mothers with children under one year old in program areas: 38.6% breastfed within one hour of delivery; 58% exclusively breastfed up to four months and 10% up to six months; 56% introduced porridge at six
months and 36% fed enriched the porridge; 87% received iron supplements during the last pregnancy and 37% took it for more than three months; 35% women were supplemented with vitamin A following delivery; and 90% of their children had been weighed at least once, and 60% of those were done by community agents.

- A “rapid assessment” (cluster household survey) in September 2003 assessed progress in the level of EBF of children under six months of age, as illustrated by the two examples of Louga and Thies regions in Figure 6.

Figure 6. Senegal—Exclusive Breastfeeding of Children < 6 Months, 24 Hour Recall, Louga, and Thies Regions

- Advocacy, coordination, development of simple tools, and supervision by the ENA program helped achieve high coverage of vitamin A to more than 80% after 1999, through linking vitamin A with NIDs initially (this helped set new levels of awareness, new policies, and updated protocols for vitamin A); and, later, through national micronutrient days and Child Health Weeks (CHWs). See Figure 7.
The program contributed to the promotion of iodized salt, and increased use of iodized salt by households from 9% in 1996 to 31.3% in 2000 (Multiple Indicator Cluster Survey [MICS ] 2000).

The site of a pilot program to introduce PD/Hearth as part of ENA in Senegal, Ida Mouride in the district of Koungheul, showed a reduced level of moderate and severe malnutrition from 47% to 4% over three and a half years.

**BENIN**

Benin is a West African country with a population of about 7 million and is bordered by the countries of Burkina Faso, Niger, Nigeria, and Togo. Benin has 42 ethnic groups, the most important being Fon, Adja, Yoruba, and Bariba. There is a substantial nomadic or transitory population in the north. Approximately 37% of the population live below the poverty line. The economy of Benin remains underdeveloped and dependent on subsistence agriculture, cotton production, and regional trade. Growth in real output has averaged a stable 5% in the past six years, but rapid population rise has offset much of this increase. Child malnutrition has been a significant problem in Benin with little improvement in the past decade.

**The Programmatic Context**

In Benin, the MOH and its partners (USAID, UNICEF, and other NGOs) developed the ENA program in the Borgou region in the north. The interventions focused primarily on EBF, prenatal...
iron supplementation, use of iodized salt, and sustained second-dose vitamin A supplementation. The 1996 Demographic and Health Surveys (DHS) found that malnutrition was highest in Borgou with 35% of children underweight (compared with a national average of 29%). After the successful implementation of ENA interventions in Borgou, the government decided to adopt ENA—named Paquet Minimum d’Activité de Nutrition (PMA/N) or minimum package of nutrition interventions—as the country’s official child nutrition program in 2000. MOH added nutrition as an integral component of its IMCI and family behaviors program.

PMA/N comprises interventions that promote the six priority nutrition behaviors, which are addressed through a health facilities component, a community component, and a multimedia communications component.

**ENA Facilitators and Activities**

The MOH and NGO partners are the main facilitators for the implementation of ENA in the country. The ENA approach was used to consolidate and focus nutrition investments being made in the agriculture and health sectors by government and NGOs. For the MOH, ENA was the nutrition component of the national “minimum package for health” strategy. Nutrition activities had been scattered across various ministries, and few were well implemented. Until introducing ENA, the Ministry of Agriculture and the Ministry of Social Affairs were responsible for most nutrition promotion activities, while the MOH dealt with treating clinical malnutrition. In addition, there was little integration of nutrition activities with routine health services, although the six interventions of the ENA approach were mentioned in the MOH policy. Apart from the duration of EBF (which in Benin in 1997 was promoted only up to four months of age), the stated national standards were consistent with international standards. Delivery strategies in operation were nonexistent or not successful in achieving high coverage.

The new ENA approach (PMA/N) addressed several operational issues in that it: (1) defined a target of 80% coverage for each of the six interventions, (2) specified simple and practical actions that could be implemented by health workers and community members to raise coverage, (3) tied in the interventions with ongoing systems and community traditions/networks, and (4) convinced health managers to address the package of interventions together (not piecemeal). This package approach helped to promote some of the lesser known or recognized interventions in the package. See Table 3 for a comparison of the focus of nutrition programs before and after the introduction of ENA in Benin.
Table 3. Shift in Focus after the Introduction of ENA in Benin

<table>
<thead>
<tr>
<th>Program Area</th>
<th>Focus Before</th>
<th>Focus Now</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target age group for interventions</td>
<td>Under 5 years and EBF up to 4 months</td>
<td>Under 2 years for ENA components and EBF to 6 months</td>
</tr>
<tr>
<td>Impact indicators</td>
<td>% median weight for age</td>
<td>% EBF for 6 months</td>
</tr>
<tr>
<td></td>
<td>height for age</td>
<td>% ACF for 6–24 months</td>
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<tr>
<td></td>
<td>weight for height</td>
<td>% receiving 2 doses vitamin A annually (6–59 months)</td>
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<tr>
<td></td>
<td></td>
<td>% vitamin A (post-partum)</td>
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<tr>
<td></td>
<td></td>
<td>% household consuming iodized salt</td>
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<tr>
<td></td>
<td></td>
<td>% prenatal women receiving IFA</td>
</tr>
<tr>
<td>Intervention focus</td>
<td>Food security</td>
<td>Preparation for EBF</td>
</tr>
<tr>
<td></td>
<td>Nutrition rehabilitation</td>
<td>EBF for 6 months</td>
</tr>
<tr>
<td></td>
<td>Nutrition education and GMP tied to food</td>
<td>2 doses vitamin A annually (children 6–59 months)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Consumption of iodized salt</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Prenatal IFA</td>
</tr>
<tr>
<td>Approach</td>
<td>Food security</td>
<td>MOH adopts ENA as national strategy for integrating nutrition in health activities</td>
</tr>
<tr>
<td></td>
<td>Food supplements</td>
<td>Health workers and community actors counseling on infant feeding (BF and ACF)</td>
</tr>
<tr>
<td></td>
<td>Nutrition rehabilitation (through Ministry of Agriculture and Ministry of Social Affairs)</td>
<td>Biannual vitamin A supplements and vitamin A status checked, supplements provided along with counseling on consumption of vitamin a rich food</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Health managers launch multiple intervention as a package</td>
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<tr>
<td></td>
<td></td>
<td>Information system adapted to ENA interventions</td>
</tr>
<tr>
<td>Priority activities</td>
<td>Ministry of Agriculture and Ministry of Social Affairs: Nutrition education and nutrition rehabilitation, Food supplements distribution, IFA for pregnant women, BFHI</td>
<td>Improved counseling skills for all contacts at health facility and community levels</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Harmonized messages and supports used at all levels; focused on the 6 ENA interventions</td>
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<tr>
<td></td>
<td></td>
<td>Health workers and community actors trained using standardized national training manuals</td>
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<tr>
<td></td>
<td></td>
<td>Supervision tools included ENA activities</td>
</tr>
</tbody>
</table>

The steps taken to operationalize ENA in Benin included the following:

- The program start up included a situational analysis, baseline survey, formative research on infant feeding practices and compliance with prenatal iron, design and testing of tools, and collaborative work planning among various units in the Direction Departmental de la Santé (DDS) of Borgou (northern region).
- The communications strategy was elaborated early in program development. It included traditional theater and mass media activities, such as radio spots and newspapers, to complement community-based volunteers and health providers.
- Health system strengthening included training for the health workers (on the relevant principles of the ENA approach, technical issues, and counseling tools for mothers and/or caretakers), supplies, adaptation of the health information system, and supervision/ASPI.
• The community component involved training community volunteers on simple, doable action messages, and linking health facilities to communities. Representatives from the community were brought into the process of message and IEC materials development. Community youth groups, women and theater groups, as well as traditional singers were involved in the design and the dissemination of messages for the communities.

• The vitamin A supplementation program involved twice annual distributions, six months apart on fixed days with NIDs for polio and vitamin A alone.

**Changes in Processes and Delivery Systems**

The influence of the ENA program on policies, services, communities, and families is summarized below:

• **Nutrition integrated into health policies**
  - The central level decided to modify EBF policies to six months, include vitamin A supplementation with NIDs countrywide, and add a second-dose strategy to achieve adequate vitamin A levels.
  - The central MOH included childhood anemia in the package of health services.
  - The role of MOH in prevention of malnutrition was expanded.

• **Access and quality of nutrition services improved**
  - Selected communities were involved in testing the level of iodine in the salt in coordination with *Service Alimentation et Nutrition Appliqué* (SANA), the government unit responsible for this program.
  - As part of ENA, Borgou piloted the first non-NIDs vitamin A supplementation in Benin, resulting in coverage of about 60% of children 6–59 months of age. The Borgou experience paved the way for the first national non-NIDs vitamin A supplementation in 2002. The nationwide experience yielded about 83% coverage.
  - The ENA approach built capacity in MOH staff to achieve high coverage more rapidly for a selected group of six interventions, which helped to promote some of the lesser-known interventions in the package.

• **Household nutrition practices improved**
  - The rates of EBF under four months of age steadily increased in the department of Borgou (one of the focus areas) over the course of the project (see Figure 8).
  - A communication survey found that caretaker knowledge of essential nutrition actions was substantially higher in the intervention areas, as compared with nonintervention or less intensive areas.
Figure 8. Exclusive Breastfeeding Rates in the Borgou Region, Benin

Changes in Knowledge and Practices at the Household Level

In Benin, a household communication survey (30-household cluster survey) conducted in 2000 in the first four districts (sous préfectures)—Parakou, Kandi, Sinendé, and Ndali—showed that caretaker knowledge of essential nutrition actions was high in the intervention areas. In intervention areas, there was better communications/IEC and health worker training. Theater groups, IEC materials, training for health workers, meetings with village leaders and groups, and radio spots are examples of the main activities. Less-intense intervention areas were in proximity to the intervention areas, and, therefore, were exposed to some of the interventions, such as radio programs and nonsystematic distribution of materials to community health centers.

NIGERIA

Nigeria is the largest country in Africa, located in Western Africa, bordering the Gulf of Guinea, between Benin and Cameroon. It has an estimated population of about 145 million. It is Africa’s most populous country and includes more than 250 ethnic groups. The following are the most populous and politically influential: Hausa and Fulani, 29%; Yoruba, 21%; and Igbo (Ibo) 18%. Political and social instability has taken a toll on development programs and health services. The ENA program is being used in three states (Abia, Kano, and Lagos) that are typical of the three predominant sociopolitical zones of the country.

The Programmatic Context

Malnutrition levels in Nigeria are among the highest in Sub-Saharan Africa. A substantial proportion of children are malnourished in both urban (35% of children under five are stunted) and rural areas (45% of children under five are stunted) according to the 1990 DHS survey. Within Nigeria, the northeast and northwest regions have 30% higher levels of stunting and

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5 In each of the four districts, a random sample of two neighborhoods was selected.
underweight children as compared with the southeast and southwest regions. Half or more children in the northern regions suffer from chronic malnutrition. The nature and severity of underlying and basic causes of malnutrition are distinctly different in the north, suggesting the importance of a locally relevant strategy for addressing malnutrition in the northern areas of Nigeria. Infant feeding practices in children under two years old were identified as key to improving nutritional status in all regions.

Specific deficiencies of micronutrients, particularly vitamin A, iron, and iodine, were estimated to be serious public health problems in Nigeria (UNICEF 1994). Before ENA, an explicit national vitamin A policy or strategy could not be identified; there were no plans to operationalize vitamin A through NIDs. Data were not found on iodine levels in salt samples or trends in urinary iodine levels. Iron and folic acid supplementation protocols and policies could not be located. Complementary foods were introduced late in about half of all infants nationally (DHS 1990), and smaller studies indicate that the quality of CF needed attention. EBF in Nigeria was among the lowest in Sub-Saharan Africa. In 1990, less that 2% of infants under six months of age were exclusively breastfed.

When ENA interventions were first assessed in 1999, there was no identified national nutrition policy or strategy, although one was reportedly nearing completion. The scant attention paid to decisions, such as an inadequate adaptation of the nutrition components of IMCI and an absence of timely decisions regarding NIDs-linked vitamin A distribution, as well as other gaps, showed that leadership was not strong. The importance of nutrition in child survival was not fully acknowledged. See Table 4 for a comparison of pre- and post-ENA programs in Nigeria.

### Table 4. Shift in Focus after the Introduction of ENA in Nigeria

<table>
<thead>
<tr>
<th>Program Area</th>
<th>Focus Before</th>
<th>Focus Now</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target age group for interventions</td>
<td>Under five years</td>
<td>Pregnant and lactating women and children &lt; 2 years</td>
</tr>
<tr>
<td>Impact indicators being used</td>
<td></td>
<td>• % of mothers initiating breastfeeding within an hour after delivery</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• % of infants &lt; 6 months exclusive breastfed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• % of children (0–23 months) breastfed</td>
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<tr>
<td></td>
<td></td>
<td>• % of infants from 6–9 months receiving complementary food in addition to breastmilk</td>
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<tr>
<td></td>
<td></td>
<td>• % of children &lt;5 years having received vitamin A supplement in the last six months</td>
</tr>
<tr>
<td>Interventions focus</td>
<td>• Access to and use of iodized salt</td>
<td>• Exclusive breastfeeding from 0–6 months</td>
</tr>
</tbody>
</table>
Table 4. Shift in Focus after the Introduction of ENA in Nigeria (continued)

<table>
<thead>
<tr>
<th>Program Area</th>
<th>Focus before</th>
<th>Focus Now</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approach</td>
<td>• National salt iodization policy</td>
<td>• ENA incorporated into national plan of action for nutrition</td>
</tr>
<tr>
<td></td>
<td>• National breastfeeding policy</td>
<td>• System strengthening includes ENA</td>
</tr>
<tr>
<td></td>
<td>• Support for implementing the breast milk substitutes marketing code</td>
<td>• Community mobilization and BCC for improved infant feeding practices through catchment area planning and action committee members and community health promoters</td>
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<tr>
<td></td>
<td>• BFHI</td>
<td>• Biannual vitamin A through Child Health Weeks</td>
</tr>
<tr>
<td></td>
<td>• Multisectoral approach to implementing nutrition</td>
<td>• Input into HIV/AIDS and infant feeding guidelines</td>
</tr>
<tr>
<td></td>
<td>• Nutrition surveillance</td>
<td></td>
</tr>
<tr>
<td>Priority activities</td>
<td>• Iodized salt</td>
<td>• Community approach for the promotion of exclusive breastfeeding from 0–6 months</td>
</tr>
<tr>
<td></td>
<td>• Iron and folic acid supplementation in prenatal care</td>
<td>• Promotion of optimum feeding practices between 6–23 months</td>
</tr>
<tr>
<td></td>
<td>• Food security</td>
<td>• Advocacy using PROFILES</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Integration of ENA with immunization and malaria control</td>
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<tr>
<td></td>
<td></td>
<td>• Strengthen and use of community platforms for ENA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Biannual vitamin A supplementation in children &lt;5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Iron and folic acid supplementation in prenatal care</td>
</tr>
</tbody>
</table>


**ENA Facilitators and Activities**

The main actors are state government nutrition officers of Lagos, Kano, and Aba states, who are located in the health department. The primary health center and LGA (Local Government Area) health staff is the operational unit for managing community-based activities. International agencies, in particular UNICEF and USAID, support the nutrition interventions in ENA. At the national level, the national planning office has a food and nutrition task force that has been in the forefront of advocacy efforts (e.g., PROFILES presentations; food fortification issues; national micronutrient survey; and links among agriculture, gender, and nutrition interventions).

BASICS/Nigeria’s ENA interventions include the following: EBF (through community health volunteers, media, and health workers), ACF (through community health volunteers, media, and health workers), vitamin A supplementation (periodic mass supplementation of 6–59 month age group at Child Health Weeks), and appropriate nutritional care for sick and malnourished children (PD/Hearth in Kano state).

Nigeria’s ENA interventions are operationalized through a three-pronged approach:

- Working at the federal level to sensitize policymakers on ENA and advocate for inclusion into the national policy; using PROFILES to sensitize a broad development audience about the costs and benefits from investing in ENA interventions.
• Training health workers on ENA to enable integration of priority nutrition actions into existing maternal and child health services, and providing them with job aids. Counseling materials were developed to encourage existing health staff to incorporate key ENA messages and services at each contact for antenatal care, delivery/postpartum care, family planning, immunization, sick-child visits, and well-baby clinics.

• Promoting enhanced infant feeding practices at community and household levels through (a) building capacity among community residents (community leaders, volunteer Community Health Promoters, and TBAs); (b) mass media communications through multiple channels; and (c) PD/Hearth model targeted to high-malnutrition areas (e.g., Kano) to rehabilitate severe malnutrition and reinforce desirable feeding practices.

State MOH teams have trained health workers in Lagos and Kano states to provide appropriate counseling on feeding options for infants born to HIV-positive mothers and training on how to integrate ENA messages and services in existing health contacts. They also have strengthened the capacity of community health promoters in both states to sensitize community members in the use of VCT (Voluntary Counseling and Testing) services and supporting EBF for the first six months in the context of HIV/AIDS.

Changes in Processes and Delivery Systems

• Primary health care activities in Lagos, Kano, and Abia states have a stronger community-based approach that is linked with health clinics at district and LGA levels. This approach, called Catchment Area Planning and Action (CAPA), involves forming committees of community leaders and local health staff to review the status of coverage with key child health and nutrition interventions, and to plan actions to be taken by health staff or community workers to improve coverage.

• The linking of immunization activities initially to NIDs and SNIDs (sub-national immunization days) with vitamin A started in 1999. This created nationwide awareness about the importance of vitamin A and created a large workforce capable of administering correct doses. The strategy for post-NIDs vitamin A is now being built on the lessons learned during NIDs.

• PMTCT (prevention of mother to child transmission) strategies now include issues related to infant feeding choices and support for EBF.

• In Kano State, the nutrition strategy now includes PD/Hearth to recuperate moderate/severely malnourished children.

• ENA promotes acceleration in the practice of priority behaviors by encouraging every caregiver to become change agents by becoming peer informants within their neighborhoods and family networks. According to a survey in 2002, on average, about 50% of the women said they have encouraged someone to practice EBF.

Changes in Knowledge and Practice at the Household Level

A survey conducted in 2003 showed that 80% of the mothers have heard of EBF in the three states where ENA is working. More than half of the women know that EBF means that all infants less than six months should receive only breast milk (with no water). On average, the level of knowledge increased by 14% between 2000 and 2002 and by 8% between 2002 and 2003. There has been a consistently upward trend in EBF levels in the three states (see Figure 9). A comparison of the rates for 2000 and 2002 reveals significant improvement in the initiation of
BF in the ENA area. In the interval between 2002 and 2003 surveys, the percentage of women initiating BF within the first hour of delivery increased by 9%, 14%, and 7% respectively in Abia, Kano, and Lagos States. All observed increases were significant (p<0.05).

**Figure 9. Nigeria—Exclusive Breastfeeding of Children < 6 Months, 24 Hour Recall, Three States**

![Graph showing breastfeeding rates in Abia, Kano, and Lagos States](image)

Source: BASICS II ICHS 2003

The linking of vitamin A with the NIDS campaigns, as well as Child Health Weeks for delivering a second dose of vitamin A capsules, helped to improve the national vitamin A coverage rates.

**MADAGASCAR**

Located in Southern Africa, Madagascar is an island in the Indian Ocean, east of Mozambique. Madagascar is one of the poorest countries in the world with 73% of the population living in poverty (Madagascar Case Study 2003) and high rates of mortality and malnutrition.

**The Programmatic Context**

The high rates of chronic malnutrition documented by the DHS 1992 and 1997 surveys spurred donors, particularly USAID, UNICEF, and the World Bank, to continue and expand their support for nutrition interventions. The Nutrition Service of the MOH oversees nutrition interventions conducted in the field. Among the approaches being implemented were the following: *Nutrition à Assiste Communautaire* (NAC) initiated in 1994 with UNICEF support and food distribution conducted by SEECALINE (World Bank project), CRS (Catholic Relief Services), and various NGOs.

Over a decade (1992–2002), the MOH and district health teams in Antananarivo and Fianarantsoa regions, in partnership with other donors and NGOs, supported a program that attempted to mobilize communities and linked them with quality services for reproductive and child health. Nutrition was added in the form of ENA in 1996 (BASICS I report 1996). The program was initially carried out in 2 districts, then expanded to 20 districts. Elements of the comprehensive family health program were transferred to additional districts and regions through
collaborating partners, such as other bilaterals, the MOH, NGOs, and multilateral agencies. The total population that benefited from the program is estimated to be more than half of the population of the country. See Table 5 for a comparison of the nutrition focus before and after the introduction of ENA in Madagascar.

Table 5. Shift in Focus After the Introduction of ENA in Madagascar

<table>
<thead>
<tr>
<th>Program Area</th>
<th>Focus Before</th>
<th>Focus Now</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target age group for interventions</td>
<td>• Children under five</td>
<td>• Children 0–23 months</td>
</tr>
<tr>
<td></td>
<td>• Pregnant women</td>
<td>• Pregnant women</td>
</tr>
<tr>
<td></td>
<td>• Postpartum women</td>
<td>• Postpartum women</td>
</tr>
<tr>
<td>Impact indicators</td>
<td>• Stunting in 6–11 months old and children under 5</td>
<td>• % women who began BF immediately after delivery</td>
</tr>
<tr>
<td></td>
<td>• Underweight in 6–11 months old</td>
<td>• % infants &lt; 6 months exclusively BF</td>
</tr>
<tr>
<td></td>
<td>• Night blindness among 2–6 years old children</td>
<td>• % infants (6–11 months) given breastmilk plus at least three complementary foods/day</td>
</tr>
<tr>
<td></td>
<td>• Anemia in pregnant women in the third semester</td>
<td>• % children (12–23 months) receiving at least five meals/day</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• % children receiving additional meal after illness</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• % women receiving 90 or more iron/folic acid tablets during their pregnancy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• % children 6–59 months receiving vitamin A supplement in the past months</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• % of women receiving vitamin A supplements within eight weeks of post partum</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• % of households with iodized salt</td>
</tr>
<tr>
<td>Interventions focus</td>
<td>• Breastfeeding through BFHI</td>
<td>• EBF for infants 0–6 months</td>
</tr>
<tr>
<td></td>
<td>• Title II MCH food</td>
<td>• Appropriate complementary feeding practices between 6–23 months</td>
</tr>
<tr>
<td></td>
<td>• Salt iodization</td>
<td>• Proper feeding practices after illness</td>
</tr>
<tr>
<td></td>
<td>• Vitamin A supplementation</td>
<td>• Iron/folic acid supplementation during pregnancy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Vitamin A supplementation for children 0–59 months and lactating women with 6–8 weeks after delivery</td>
</tr>
<tr>
<td>Approach</td>
<td>Nutrition program under the the MOH service of nutrition encompassing single interventions to address each problem identified</td>
<td>Supporting communities to improve their reproductive and child health practices.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Focus on preventive household behaviors including six ENA interventions plus maternal nutrition</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Integrating child health, RH, and ENA services</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Maximizing scale</td>
</tr>
<tr>
<td>Priority activities</td>
<td>• BFHI</td>
<td>• Mass mobilization of all sectors for family health</td>
</tr>
<tr>
<td></td>
<td>• Title II MCH</td>
<td>• Community-based breastfeeding and child feeding</td>
</tr>
<tr>
<td></td>
<td>• Salt iodization</td>
<td>• Nutrition integrated with all health contacts</td>
</tr>
<tr>
<td></td>
<td>• Vitamin A supplementation</td>
<td>• Micronutrients</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Strong nutrition component of integrated management of childhood illness (IMCI)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Pre-service curricula</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Advocacy using PROFILES</td>
</tr>
</tbody>
</table>
From 1995 to 1998, the overall focus was placed on designing mechanisms that linked nutrition interventions more directly with other child health and Reproductive Health (RH) services, and national- and community-level actions. The objectives were to (a) build national capacity to develop and implement Child Survival (CS) and nutrition policies, (b) develop district capacity to manage nutrition interventions as a part of CS programs, and (c) promote sustainable behavior change for CS and nutrition at community and household levels.

**ENA Facilitators and Activities**

Building on the achievements of two initial districts (demonstration sites [DS]), the MOH and its partners took the lead to develop and implement the ENA program. Following a situational assessment that focused on the set of six ENA key behaviors and interventions, formative research on infant feeding practices was performed, in-service training was initiated, and work began on communications materials.

Delivery strategies and approaches used to implement the interventions included the following:

- High frequency and intensity of BCC activities through multiple channels
- Training of health workers in clinical and counseling skills, interpersonal communication, and supervision
- Use of negotiation techniques to change household behaviors: the negotiation technique that underlies the Trial of Improved Practices (TIPS) method has been streamlined and forms the foundation for promoting optimal health practices
- Support for community-based organizations and individuals: expanded support is given to community leaders, community volunteers, and women’s groups, and includes training in village theater and (interpersonal) counseling
- Orientation/training on how to integrate essential actions into existing MCH services: this specific training was provided to frontline health workers
- Important links forged from district- to national-level organizations: connections were made at the national level to ensure that policies and coordinating mechanisms were in place among partners that were involved in nutrition
- Advocacy of the use of PROFILES, a data-based presentation quantifying the benefits and costs of nutrition actions: this was used to inform audiences ranging from community leaders to national lawmakers; a broad-based, multisectoral, awareness-raising campaign was undertaken
- Invocation of mass media and communications: this large campaign included radio, television, festivals, print media, and the use of celebrities to promote targeted messages; and
- Systems strengthening: this involved supplies, monitoring and evaluation, rapid assessments, training, and pre-service education.

Infant feeding practices, and particularly BF, were a major program focus throughout 1995–2002. Used as the first component to initiate the strengthened program in communities of the two provinces, BF served as common ground and as an entry point for CS, family planning (FP), and nutrition programs. The promotion of LAM was emphasized as a FP method in the BF training course, and is also part of the “modern” FP methods offered in Madagascar. This represents a unique feature of the Madagascar program.
BF promotion is also carried out through the BFHI—a program launched by WHO and UNICEF in the 1990’s. To date, 66 hospitals/maternities have been granted the BFHI imprimatur. The MOH, with support from LINKAGES and UNICEF, is implementing a new national strategy that includes support for training BFHI health staff with (a) four self-learning guidelines (Advocacy, Techniques of BF, BF Problems and Their Solutions, and IEC); and (b) monthly meetings with health personnel to review training guidelines and practice techniques. The postpartum supplementation of mothers with vitamin A was added to the BFHI criteria in Madagascar.

The new strategy is based on a review of self-learning modules during training and self-evaluation carried out by each maternity hospital. Significant improvements were achieved. Among the 12 hospitals that carried out this strategy, the quality of the Baby-Friendly Hospital (BFH) was improved up to 92%, compared with 70% found in the first evaluation and 61% found in the 38 BFHs nationwide. One important lesson learned was the need for continuous training to maintain the quality of the BFHI.

Complementary feeding practices were a focus of the IEC tools and developed from careful TIPS formative research in 1997–98. The IMCI program helped expand attention given to assessing infant and young child feeding practices as part of routine sick-child care.

Salt iodization was already considered a success story by the MOH in 1997, when surveillance data showed evidence of reduced iodine deficiency and an increased percentage of households consuming iodized salt. The new program reinforced the importance of families looking for brands of salt with logos certifying iodization. In some areas, there was a several-fold difference in the price of iodized and crude salt. Iron/folic acid (IFA) supplementation was part of routine antenatal clinic instruction, even before ENA was introduced, but compliance was low. The new program focused on compliance by pregnant women and food sources to improve nutrient intake among women and children. Supplementation of vitamin A was introduced as a national program in 1998 with the development of the national micronutrient policy and protocol. Two major events took place to promote the change:

- In September 2000, the MOH initiated a national vitamin A distribution day to deliver a second dose to children receiving the first dose through NIDs; and
- At the end of 2000, postpartum vitamin A for women after delivery became one of the BFHI steps.

ENA was implemented in three phases (listed in order):

1. Support to national policy, which culminated with the establishment of *Groupe d’Actions Inter-Sectoriel en Nutrition* (GAIN), an intersectoral action group for nutrition.

2. Support to district and community activities. The community approach was developed as part of a comprehensive child health strategy, adopted by the MOH with support from UNICEF and WHO as C-IMCI, along with the “small, doable actions” approach. The latter saturated communities with key messages through multiple communications channels, including volunteers and women’s groups.
3. Support at a regional level. Following the scaling-up process begun in 2001, a regional package was developed with the following elements:

- Regional-level nutrition coordinating groups or GAINs;
- Promotion of self-learning training modules for health workers;
- Mass media (radio and television);
- Baby-Friendly Hospital, Clinic, and Workplace Initiatives;
- Pre-service medical and paramedical training; and
- Training of private doctors.

Changes in Processes and Delivery Systems

The improvements in indicators in the two program districts tended to be greater in program areas than in the country and provinces as a whole, suggesting that the program is likely to have had an effect. Further evidence was sought on intermediate-level changes related to CS interventions implemented in program areas. These included indicators of strengthened health provider skills, supplies, and community participation in the two program districts (BASICS I Final Report, MOH/BASICS I Health Facilities Surveys 1996 and 1998):

- The percentage of health centers that had stocks of essential drugs—chloroquine, vitamin A, cotrimoxazole, oral rehydration salts (ORS), and mebendazole—available without gaps in the previous one month increased from 27% to 71%
- The percentage of health centers that had received at least one supervision visit in the past six months increased from 64% to 92%
- The percentage of health centers that had a functioning refrigerator on the day of the visit increased from 51% to 75%
- In 1996, neither district had cost recovery mechanisms in place to raise resources for replenishing drug supplies. In 1998, a cost-recovery system was in place in all 53 health centers in the districts: 16 followed the Bamako Initiative model, and 37 a new MOH system
- The number of “active” health committees engaged in promoting key messages increased from 40 in 1997 to 146 in the eight program communes in 1998 (BASICS I Final Report 1993–1998)
- The number of community members reached through meetings and workshops increased from 850 in 1997 to 2,089 in 1998
- The percentage of the population who recalled health messages from at least two community-based channels was reported to have reached 49% in 1998

Two health facility surveys carried out in 1996 and 1998 in the early implementation districts reported the following improvements in the quality of child services:

- Cases of sick children whose parents were given at least two correct messages on when to bring the child back to the health center increased from 3% to 51%
- Cases of sick children whose parents were given at least two correct messages on how to care for the sick child at home increased from 45% to 87%
- Cases of sick children weighed during their consultation increased from 11% to 77%
- Cases appropriately assessed for feeding increased from 6% to 77%
- Cases receiving one or more priority messages during the consultation increased from 57% to 92%
Changes in Knowledge and Practice at the Household Level

Two household surveys conducted in 1996 and 1998 showed the following percentages:

- Children ages 12–23 months who were fully immunized increased from 57% in 1996 to 78% in 1998
- Women whose infants were protected against neonatal tetanus at last birth increased from 53% in 1996 to 72% in 1998
- Women who began BF immediately after delivery increased from 21% in 1996 to 69% in 1998
- Infants less than six months of age who were exclusively breastfed increased from 48% in 1996 to 72% in 1998
- Infants ages 6–11 months given breastmilk plus at least three complementary foods remained at 80% in 1996 and 1998
- Children 12–23 months receiving at least five meals per day increased from 10% in 1996 to 42% in 1998
- Mothers who knew two or more danger signs for seeking care when their child was ill increased from 40% to 70%
- Children who received additional meals after illnesses did not change—from 18% in 1996 to 19% in 1998
- Women receiving 90 or more IFA tablets during their pregnancy increased from 6% in 1996 to 43% in 1998
- Women receiving vitamin A supplements within the first eight weeks after delivery increased from 10% in 1996 to 37% in 1998
- Households with iodized salt available on the day of the survey increased from 29% to 81%
- Parents of sick children interviewed on the day of their visit to a health center who could correctly describe how to administer the prescribed medicine increased from 33% to 87%

Some household-level indicators that were included in the 1997 DHS and a national MICS survey (UNICEF 2000) can be compared with program areas. The comparisons are between program areas versus the provinces as a whole and the national averages. For example:

- Early initiation of BF increased in program sites from 21% in 1996 to 69% in 1998 as compared with a national level in 1997 of 34% and province levels of 31% for Antananarivo and 39% for Fianarantsoa (DHS 1997)
- EBF in infants less than six months of age increased from 48% to 72% versus a national level of 47% according to DHS (1997), and 41%, according to MICS (2000)
- The percentage of fully immunized children ages 12–23 months increased from 57% in 1996 to 78% in 1998 in the two program districts, while the national coverage was 36% in 1997; nationally, immunization coverage was declining during 1992–97 (DHS 1997)
- The percentage of households with iodized salt available on the day of the survey increased from 29% to 81% in program areas but was also high nationally at 76%, according to MICS (2000); note that iodized salt and vitamin A supplementation for children were implemented as national initiatives affecting all provinces

Starting in 2000, early initiation of breastfeeding increased in program sites. In comparable non-program sites, the levels remained at around the national average of 34% as per the 1997 DHS.

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6 Also see Rahantanirina et al. 2002.
Three-fourths of the infants surveyed were exclusively breastfed in program areas as compared with 40% in non-program areas. National EBF levels were 48% according to the 1997 DHS. Program implementers attributed a decline of 8% from 2001 to 2002 to disruptions in supervision and follow-up activities following civil disturbances after the presidential elections in 2001. The frequency of CF improved over time after the baseline in 2000 in program areas and was substantially better than in control areas.

In the early implementation districts in 1998, a household survey showed that coverage of children ages 6–59 months was 29%. This was before mass supplementation through NIDs or vitamin A months was started. It appears that national distribution may have been high in the initial rounds (e.g., 85% in the 12–23 month age group in 2000), but there was a decline in 2001 and 2002. Note that the 2001 and 2002 surveys excluded vitamin A given as part of routine services and does not include the full target age group of children ages 6–59 months.

INDIA

The Programmatic Context

In 2000, USAID reviewed the situation of child health and nutrition in India and concluded the following (USAID 2000):

- While child mortality and malnutrition in India have declined over the past two decades, the declines have not been maintained. A recent analysis suggests that the decline in child mortality started leveling off in the mid-1990s. Improvements in national aggregates obscure important differences among and within states, and mask large disparities between gender and economic groups.

- Substantial GOI (Government of India) investment in the Integrated Child Development Services (ICDS) nutrition program has not accelerated nutritional gains above what is expected by way of secular trends and improved nutrition indicators that accompany economic development. India still has among the highest national levels of severe malnutrition and anemia in the world.

- Proven community-level interventions are available to address common child health and nutrition problems but are not being systematically implemented in India.

More than 70% of children in India are born in the normal grade. By 12 to 18 months, however, about 60% or more are malnourished. Even in homes with sufficient food, young children are allowed to become malnourished. The vast majority of these children can be maintained in the normal grade through improved feeding practices, micronutrient supplements, and better care and feeding during and just after illnesses.

The interventions that CARE/India’s INHP II has chosen to strengthen are already part of the Reproductive and Child Health (RCH) and ICDS programs. For example, frontline service providers are trained to promote EBF, CF, and a good diet during pregnancy, as well as administer vitamin A and IFA supplements. Assessments show, however, that some elements are not being implemented effectively (CARE/INHP II Early Learning Site Documentation, September 2003 and ongoing program reviews). In particular, the focus is not on preventing malnutrition but on detecting malnutrition (especially in grades 3 and 4), there is inadequate or nonexistent counseling on infant feeding, and there is little focus on completing the doses for
vitamin A and pediatric IFA. Infant feeding is a particularly neglected area, and providers should emphasize the intake of appropriate amounts and types of food starting at six months of age.

A strengthened operational approach for INHP II began implementation at scale in April 2002 in eight states with clear a scale strategy that includes (1) identifying DS and replication sites (RS); (2) accelerating four processes or “best practices”; (3) deepening of technical content once processes are in place; (4) capacity building in government and NGOs; (5) addressing institutional issues; and (6) documenting with evidence. The program is now being replicated in more than 25,000 villages.

**ENA Facilitators and Activities**

CARE/India is the chief facilitator of ENA that supports two large government-run programs (RCH and ICDS). CARE assists the government to implement INHP II in 70 districts across eight states to reach 10 million women and children by the end of 2006. The program focuses on ENA, routine immunization, and newborn care. CARE/India’s INHP II (2001–06) is the second phase of a USAID-funded project, supported with PL 480 Title II and CS funds. During the second five-year phase of the project, CARE strengthened the child health interventions, which now include community-based newborn care, primary immunizations, and essential nutrition actions. It supports actions at the systems and community levels.

The primary managers and implementers of the interventions are the RCH project of the Ministry of Health and Family Welfare (MOHFW) and the ICDS of the Ministry of Human Resources Development’s Department of Women and Child Development (DWCD). A large number of community-based workers (Anganwadi Workers [AWW] of ICDS and volunteer Change Agents [Cas] supported by AWWs) constitute the frontline of this program. In addition, Auxiliary Nurse-Midwives (ANMs) provide health care at monthly outreach sessions in each village.

**Changes in Processes and Delivery Systems**

See Table 6 for a comparison of the focus of nutrition programs in India before and after the introduction of ENA in INHP II sites.

<table>
<thead>
<tr>
<th>Program Area</th>
<th>Focus Before</th>
<th>Focus Now</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target age group</td>
<td>Under Six</td>
<td>Under Two (especially under ones and after each illness).</td>
</tr>
<tr>
<td>Impact indicators</td>
<td>Number of children in grades 3 and 4 malnutrition</td>
<td>• % ‘Normal’ grade nutrition in children weighed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• % Children following feeding recommendations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• % Children receiving 5 doses of Vitamin A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• % Anemia in children or % children consuming IFA supplements</td>
</tr>
</tbody>
</table>
| Intervention focus | • Supplementary food distribution,  
• Antenatal IFA distribution | • Early initiation of EBF; EBF through 6 months (180 days), |
| | | • CF quality/quantity, feeding during and after illness |
| | | • Maternal and child IFA consumption; 5 vitamin A doses |
| | | • Promoting adequate weight gain. |

(Table continued on next page)
<table>
<thead>
<tr>
<th>Program Area</th>
<th>Focus Before</th>
<th>Focus Now</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approach</td>
<td>Mainly through ICDS</td>
<td>ICDS and RCH service providers and managers share equal responsibility for preventing malnutrition and completing vitamin A and child IFA doses. For RCH this involves, • ANM checking infant feeding practices at each contact with children under two years; checking newborns’ feeding practices after delivery • Increased emphasis on feeding as part of treatment for ARI, diarrhea, and fever • Routine review of % ‘Normal’ grade children</td>
</tr>
<tr>
<td>Priority activities</td>
<td>• ICDS: supplementary food distribution, Grades 3 and 4 malnutrition • Health: ANM distribution of IFA during antenatal period</td>
<td>• Effective counseling skills and checking adequate weight gain IEC/BCC: At least 5 different channels per village with action messages on EBF for 6 months, CF quantity and quality, feeding during illness • Monitoring: ‘Normal’ grade children 1–3 years, EBF/CF (through Supervisors checklist), Vit. A-I and Vit.A-V, IFA consumption during antenatal period and children 1–3 years, • Supplies: Vit.A, IFA, and IEC materials for service providers and CAs. • Supervision: emphasis on feeding practices, % ‘Normal’ grade, counseling skills and completion of Vitamin A and IFA doses</td>
</tr>
</tbody>
</table>

An assessment of the early implementation phase of INHP II showed the following results.

**Access and quality of nutrition services improved**

- Between 200,000 to 300,000 community workers and service providers in 74 districts of India were trained in child health and ENA interventions during 2001–2003. Volunteers from the community (CAs), and AWWs, and ANMs were trained to help promote and monitor nutrition, and counsel families about positive health behaviors. The training focused on the importance of BF up to six complete months and the dangers of giving water or other foods during that time; the age at which semisolid foods should be initiated as well as the quantity, frequency, and types of foods that should be given to children 6–24 months as appropriate CF practices; and the importance of vitamin A and the timing of the first dose with measles vaccination.
- Managers in three out of three districts interviewed also reported that service providers and CAs had received training during capacity building sessions on how to counsel households using IEC materials and problem-solving methods for infant feeding practices. In one district in Rajasthan, there is a special focus on LAM as an effective method of fertility control.
- Because of the capacity building efforts, managers in some states have reported that service providers have started following up with mothers and children after the CF initiation ceremony. Managers in several areas have also reported a better awareness of tracking “normal-nourished” children (in addition to the number of severely malnourished children) and focus on ACF to increase the number of normal grade children.
- In intervention sites, AWWs and ANMs made significantly more contacts with families with pregnant women or child under one year of age than in previous years before the introduction of the CARE program.
• In some areas, managers reported improvements in the supply and distribution of vitamin A. Managers in Bikaner District, Rajasthan, reported that biannual distribution of vitamin A supplies was integrated with routine Nutrition and Health Days (NHDs), which had also increased in frequency by 20%.

• Program managers in two out of three states interviewed reported improvements in tracking five doses of vitamin A up to the age of three. One state reported conducting “catch-up” campaigns when large numbers of left-outs and drop-outs were determined in a particular area.

• It was reported that, in some areas of the state of Chhattisgarh, a seventh component is being added to ENA—Mebendazole for deworming—and efforts have been made to ensure distribution and supplies of the medicine.

• In at least one state (Chhattisgarh), partnerships with NGOs and DANIDA (Danish aid agency), the Forestry Department, and various income-generating activities have increased the platforms to expand the promotion of ENA. Civil societies have also involved people from the community to start a “Malnutrition Unacceptable Movement.”

Work with community-based organizations and networks from all sectors

• The program developed and trained a cadre of CAs who monitored and promoted positive nutrition and health behaviors among 15–20 families. Key to the success of the CAs was training, follow-up support, attention and recognition received from outsiders, and defined catchment areas. The CAs counseled women on appropriate infant feeding practices, and encouraged IFA consumption and attendance at educational sessions.

• Community-based monitoring systems (CBMS) were designed to help mobilize and empower communities to manage the health and nutrition status of women and children through village-level social maps depicting key indicators and family-based self-monitoring tools (SMTs). The social maps helped define catchment areas with target populations. Although SMTs depicted through wall writing were not used widely, there was evidence that they may have served as visual reminders of program messages.

• INHP’s links with self-help groups, newly invigorated mahila mandals (women’s groups), village development committees, and TBAs have empowered village women, such as the CAs, to become effective agents for behavioral change among their peers.

Communications, public awareness, and IEC

• NHDs are fixed days, occurring at least once per month, when take-home rations are distributed, and an ANM visits the Anganwadi center (AWC) and offers immunization and/or antenatal care services. These sessions are widely publicized and implemented and are an important opportunity for nutrition and health education sessions where the AWW and CAs spread key messages, including those of ENA.

• Key BCC messages were also spread through street theater, songs, wall writing, healthy baby competitions, and radio programs.

Changes in Knowledge and Practice at the Household Level

A rapid assessment survey in May 2003 compared the nutritional practices in the intervention areas with non-intervention areas. There were statistically significant differences among all the indicators measured (see Figures 10 and 11). For example,

• EBF coverage was 69% in Early Learning Sites (ELS) areas compared with 58% in non-ELS areas
- Early initiation of BF was also found to be higher in ELS sites, with 65% reporting initiating BF within one hour of the child’s birth compared with 38% in non-ELS areas.
- Rapid assessments carried out in May 2003 found that 68% of infants aged 6–8 months in ELS received the recommended number of daily meals (two or more) compared with 59% in non-ELS; however, quantities of complementary foods were inadequate.
- Consumption of one dose vitamin A among children ages 9–11 months was 60% in ELS areas compared with 43% in non-ELS areas.

**Figure 10. Behaviors Related to Infant Nutrition, India**

![Graph showing behaviors related to infant nutrition in India](image)

**Figure 11. Behaviors of Mothers during Pregnancy and Neonatal Period, India**

![Graph showing behaviors of mothers during pregnancy and neonatal period in India](image)

An important outcome of INHP II appears to be a reduction in economic inequity. Coverage gaps between the poor and better-off families were lower in intervention areas than in non-intervention areas for several indicators. However, large gaps remain. Among project approaches and processes, the social map appears to have been critical in the initial enumeration of all neighborhoods in the catchment area and could explain, in part, the narrowing in gaps between the poor and better-off families. Selecting change agents from all neighborhoods was another strategy that helped.
IV. DISCUSSION OF EXPERIENCES IN THE USE OF ENA

A number of common findings emerged from the collective experiences of five countries where ENA was implemented.

A. ENA Facilitated Changes in Processes Related to Improved Nutritional Outcomes

**Routine Health Services Expanded the Delivery of Priority Nutrition Services**

One of the ENA strategies for rapid increase in coverage of interventions is to incorporate them into routine health activities and link them with health systems as well as other social programs. In Benin, Nigeria, Senegal, and Madagascar, vitamin A supplementation was added to NIDs for polio eradication. Child health cards were revised in Benin, Senegal, and Madagascar to include relevant ENA information. In Senegal, integrated supervisory tools were developed, and the ENA package was initially integrated into primary health care services in two health centers and eight health posts in two districts and later expanded to 21 districts under *Paquet d’Activités Intégrés de Nutrition*. The CAPA approach in Nigeria integrated infant feeding and vitamin A with immunization and malaria control activities. In Benin, the HMIS (Health Management Information System) system was revised to include nutritional data. Senegal added iron deficiency anemia to its national survey, and ENA indicators were added to routine monitoring and supervision. In India, Department of Health staff are being trained in ENA interventions, and health is being added to the national ICDS nutrition program.

In all five countries there was evidence that ENA interventions were not only adopted within primary health care services, but also implemented. Training of health workers and BCC activities were designed and implemented to address the ENA in combination with other health interventions. As the limits of existing health services to reach the desired coverage were approached, special actions were introduced to expand coverage through outreach, CBOs, and partners. Examples of additional actions included Child Health Weeks, PD/Hearth, and micronutrient days.

Each country program also placed considerable emphasis on working and collaborating with other sectors, including training staff in nutritional issues, cooperating with other sectors in communications approaches, and implementing joint programs. In Benin, staff from the ministries of agriculture and social affairs were trained, and there was close cooperation with SANA (*Service Alimentation et Nutrition Appliquée*) for iodizing salt and other interventions. In Senegal and Madagascar, the communications program involved schools, agricultural extension workers, and many community groups, including religious groups. In India, the block-level advisory committees served as a focal point for participatory planning and monitoring discussions among the INHP II, ICDS, RCH, NGOs, and local government institutions (Panchayati Raj Institutions or PRI). In Nigeria, the CAPA approach emphasized bringing together all social sectors and partners at the state, local government, primary health care center, and community levels. The CAPA committees—which include community leaders, CBO representatives, traditional healers and birth attendants, school teachers, trade representatives, public and private health center staff, and government representatives—are responsible for raising awareness and educating the community about the nutrition interventions. In Madagascar, a broad community-wide movement included mayors, a pop singer, teachers, actors, and community leaders who were engaged in the communications activities.
Nutrition Policies Were Revised

The PROFILES advocacy package (a computer modeling program) was used in all but Benin to communicate the payoffs from investing in ENA interventions. This led to greater awareness and participation in nutrition activities by senior health staff, creation of new coordinating bodies, and uptake by more NGOs of ENA. In Senegal and Madagascar, appropriate feeding practices were mainstreamed through IMCI. Some of other the key policy changes in Senegal were: the duration of EBF; the initiation of CF; full integration of LAM as part of family planning; implementation of guidelines for case management of nutrition-related illnesses; adoption of 1997 WHO vitamin A supplementation recommendations; and standardized protocols for iron supplements for pregnant women and deworming.

In both Benin and Senegal, the ENA approach was adopted as a national strategy and incorporated into national nutrition policy. Childhood anemia was also added to the package in Benin. Several factors played important roles in facilitating Benin’s adoption of the ENA approach. DDS, the provincial MOH representative, was involved early in joint assessments and planning activities for PMA/N. The head of the national Nutrition Division and other technical officers also took an early and active part in the development of the Borgou experience.

In Madagascar, the postpartum supplementation of mothers with vitamin A was added to the BFHI. Baby-Friendly Workplaces, a new and promising initiative launched by the MOH, call for establishing lactation rooms at the workplace and developing modules to increase the understanding of the importance and benefits of optimal BF and CF practices for both employer and employee. ENA has become an integral part of the medical school pre-service curriculum.

In Nigeria, nationwide vitamin A supplementation was adopted as a national strategy, initially through NIDs and subsequently through CHWs. The PD/Hearth model was adopted by the Kano state as their “catalyst” ENA intervention and helped to convince health workers, community leaders, and caregivers of the importance of child feeding practices and the ability of the community to combat malnutrition using local resources.

In all countries, work was needed to adopt six months as the appropriate recommendation for EBF.

Access of Families to Commodities and Health Promoters Improved

The country programs succeeded in improving access to nutritional services and supplements in three ways: improving supply, offering community-based distribution, and increasing the delivery of ENA services through contacts with health workers and community-level promoters.

Supplies
At peripheral levels in India, stock-outs of essential supplies as reported by the AWW were lower (3–10% IFA, 17% for vitamin A) in the non-intervention areas (i.e., RS) than in the intervention areas (i.e., ELS), where levels were 36–39% for IFA and 46% for vitamin A.

In Senegal, the program addressed problems related to the supply of vitamin A supplements and advocated to allow TBAs to provide iron supplements to women in early pregnancy. During an evaluation in 2000, iron was available in all 27 health facilities visited in the BASICS II-supported areas, and vitamin A was available in more than 90% of them. Before Paquet d’Activites Integres de Nutrition, vitamin A was not available in most facilities. In Madagascar, the percentage of health
centers that had stocks of essential drugs, including vitamin A, available without gaps in the previous month increased from 27% to 71% (Madagascar Case Study 2003). In Senegal, community agents distributed vitamin A supplements, which achieved a higher coverage rate (93% during the first National Micronutrient days in 2001) and allowed health workers to perform other tasks. Going beyond the local communities, the *Paquet d’Activités Intégrés de Nutrition* program worked with small producers of iodized salt to ensure countrywide distribution capacity. In both Benin and Senegal, community groups were given testing kits for iodized salt.

In Madagascar, vitamin A supplementation was unable to reach high coverage through existing services (29% per BASICS I Final Report; Carnell et al. 1999). To ensure high coverage, the MOH initiated national vitamin A distribution months during which proactive outreach sessions were held for the purpose of vitamin A supplementation. In 2001, the vitamin A months were being conducted every six months, independently of the polio NIDs that were phasing out. The same approach emerged in Benin, Senegal, Nigeria, and some states in India.

**Health Worker and Volunteer Contacts**

As mentioned above, training health workers in various aspects of the ENA can impact nutritional practices if the health workers and volunteers appropriately counsel families. In Senegal and Madagascar, the BFHI was a component that ensured that maternity centers and hospitals supported EBF, thereby increasing access to these counseling services. To date, 66 hospitals/maternities have been granted the BFHI imprimatur in Madagascar. In Senegal, *Paquet d’Activités Intégrés de Nutrition* program extended BFHI principles to district health centers and posts where many deliveries take place.

In Nigeria, India, and Senegal, community health promoters are used to increase contacts at critical ages for counseling on infant feeding, starting with BF messages in pregnancy. Child Health Weeks are designed to assure biannual contacts for vitamin A supplementation in conjunction with other health activities. Similar approaches are gaining ground in the other countries.

In Madagascar, starting in mid-2001, more than 12,000 community workers received training in infant feeding and maternal nutrition. In India’s ELS sites, AWW and ANM were making significantly more contacts with families with a pregnant women or child under one year of age as compared with nonintervention areas, following the introduction of ENA.

**The Capacity of Community Groups and Community-Based Workers Improved**

A diverse range of community agents and groups were supported to conduct a variety of activities, including home visits to high-priority age groups, group discussions for problem-solving related to ENA and underlying barriers, child weighing sessions, individual counseling, outreach activities for the distribution of supplements, and other behavior change activities.

Although the emphasis on community-based approaches was common across and within countries, the countries adapted the program to fit different community structures and ecological and cultural contexts, as well as to address different nutrition problems.

In Senegal, the program established surveillance systems and monthly evaluation of child growth. The program also developed training, supervisory, and counseling support for community support groups. A lack of weighing scales, however, has reduced coverage of growth
monitoring to about 25% of communities. Information and counseling is now being delivered without the weighing component. Program resources are invested in strengthening post-training follow-up (ASPI), a multi-channel communications component (Plan Intégré de Communication, or PIC), and operations research on neonatal health including community actions and community treatment for pneumonia as these are emerging priorities.

In India, the program developed and trained a cadre of CAs or community volunteers who monitor and promote positive nutrition and health behaviors among 15–20 families per CA in their neighborhoods. The inclusion of community organizations in the selection process for CAs helped gain community endorsement and support for their work. In an assessment, CAs were reported to have carried critical messages of infant feeding practices to mothers, pregnant women, and families through home visits. They also helped reduce left-outs and drop-outs particularly by bringing beneficiaries to the Anganwadi centers on monthly immunization days. Households in every state included in the study recognized CAs as a source of information regarding health and nutrition practices. Key to the success of the CAs was the attention and recognition they received from outsiders, the training given to them, and the definition of their catchment areas and families for follow-up.

Social mapping worked well to target interventions to the most vulnerable and increased village ownership of the program activities. It was also helpful in selecting CAs to ensure full coverage even in disadvantaged neighborhoods or hamlets.

In Madagascar, community mobilization was achieved with the help of communications and behavior change approaches. Health committees were established or reinvigorated, existing community groups of all types were engaged, and local government authorities were linked with NGOs and CBOs.

In Nigeria, very high levels of malnutrition in the north (Kano State) and the isolation of these communities and families entailed a different community approach as compared with Lagos, where access to mothers of young children and pregnant women is easier. The PD/Heath approach was successful in Kano. This approach requires a number of visibly malnourished children to be recuperated with village resources to demonstrate the importance of using locally available food resources and health services. Child Health Weeks appear to be more accepted in Lagos and Abia. Community Health Promoters (CHPs) and CAPA committees appear to be equally effective in all three states.

**Communications about Nutrition Expanded to Reach Many Different Audiences**

The communications component of these programs is closely linked to the community-based work. All of the country programs, except India where this component got a late start, included creative approaches to communication and incorporated a variety of channels. ENA interventions vary in their dependence on strong communications components. For example, infant feeding practices and diet during pregnancy interventions depend almost entirely on the effectiveness and coverage of communications activities. For iron supplements, compliance with the daily protocol is dependent on good communications. Use of iodized salt and iron supplements and vitamin A supplementation are greatly supply dependent, although effective communication components can help increase demand. More broadly, advocacy, motivation, and performance of managers and frontline workers required well-designed and tailored communications efforts in all programs.
In Senegal, the integrated IEC tools included counseling cards, posters, aide memoires for the health agents, integrated health cards, radio spots, audiocassettes, a radio series, five plays, one song, and two poems. The Benin program also included a wide range of communications materials (newsletters, radio spots, dramas, and others) that were developed based on consultative research that included the TIPS. (See Griffiths et al. 2004 for details on TIPS.)

In Madagascar, about 1.2 million new IEC materials were distributed. More than 20 radio and 15 television spots were aired on 9 television and 16 radio stations. IEC kits were produced for seven health and nutrition themes, including vaccination, Acute Respiratory Infection (ARI), BF, nutrition from 6 to 12 months, nutrition from 12 to 24 months, control of diarrheal disease, and control and/or treatment of malaria. Each kit consisted of counseling cards, a low-cost newspaper distributed by health agents and through community groups, radio spot cassettes, and village theater scenario bulletins. The bulletins were used to help field animators carry out activities and use the IEC materials correctly. These materials were used to train health workers and community groups/leaders as well as for interpersonal communication, community mobilization, and mass media activities. The messages were based on the key concept of “small, doable actions.” These actions promote family behaviors that can improve the health of Malagasy families and are used for all health initiatives, IEC materials, and media channels.

In Nigeria, the communication components include (1) posters, mobilization of religious leaders, campaigns, rallies, and traditional council meetings for awareness and community mobilization; (2) counseling cards, home health booklets, and pamphlets distributed by health providers, CAPA members, and CHPs for interpersonal communication on improved infant and young child feeding practices with mothers and caregivers; and (3) mass media, such as radio spots and billboards, to reinforce messages delivered by CHPs, CAPA committee members, and health workers.

The programs in Senegal, Madagascar, India, and Nigeria used PROFILES to communicate the urgency of implementing ENA interventions and to advocate for allocation of national resources for nutrition. Senior health and other sectoral authorities took note of and started to participate more actively in nutrition actions.

Access of Families to Critical Information and Family Knowledge Improved

As shown in Figure 5, behavioral determinants are those factors that theory and empirical evidence show are associated with resulting specific behaviors. The assumption is that if programs can affect the determinants of a behavior, it will then change that behavior. The most commonly measured behavioral determinant is knowledge about certain behaviors.

In Benin, a household communication survey (EPI or Expanded Program for Immunization’s 30-cluster survey) conducted in 2000 in the four demonstration districts (sous prefectures)—Parakou, Kandi, Sinendé and Ndali—showed that caretaker knowledge of essential nutrition actions was higher in the intervention areas. Intervention areas were the main focus of the program, including theater groups, IEC materials, training for health workers, and radio spots. Low-intervention areas were in proximity to the intervention areas, and, therefore, were exposed to some of the interventions, such as the radio programs and non-systematic distribution of materials to village health centers.

7 In each of the four districts, a random sample of two neighborhoods was selected.
In Senegal, coverage data from 2001 showed that the percentage of children under three years old, who were weighed each month, was 0% in non-implementation zones and 40% in the best sites with an average of 12% in the BASICS II zones. The availability of weighing scales was a limiting factor. There was increased demand for vitamin A from clinics to prevent childhood illnesses. Overall levels of knowledge about nutrition ranged from 65–74% of the target population (mothers of children under one year), and they cited community workers and the media as their main source of information (Paquet d’Activités Intégrés de Nutrition Evaluation Report 2000).

In Madagascar, the percentage of the population who recalled health messages from at least two community-based channels was reported to have reached 49% in 1998.

In India, service providers and volunteer CAs were important for the effective delivery of nutrition and health messages in ELS. The percentage of households in ELS that recalled at least one contact with the AWW, ANM, or CA was significantly higher than in households in RSs (non-intervention areas).

B. Lessons Learned about What Works and How

At National Level

Appropriate nutrition policies can strengthen the foundation for local efforts but are not enough. In India, the national policy was appropriate, but this did not translate into implementation of the policy with follow-up. However, in countries where nutrition policies were inappropriate, and policies provided the mandate for field actions, policy change was critical to further work.

Donor continuity is key. Any new approach or way of focusing and prioritizing takes time to take root and produce momentum. USAID, as well as UNICEF and, in some countries, NGOs (e.g., CARE), have supported these programs since at least 1996 in some cases. “Donor continuity is one factor that accounts for the success of the program in Madagascar” (Madagascar Case Study 2003). In India, CARE built on the external evaluation of INHP I that was implemented from 1996–2001. Nigeria built on the experience of Community Partnerships for Health that began in 1996. The experience gained over several years helped Nigeria rapidly achieve scale-up.

To achieve scale requires streamlining, explicit strategies, and resources. It is clear that scale is multi-dimensional; it needs policy work and strong partnerships for rapid uptake across diverse administrative levels, organizations, and delivery channels. It also requires resources. Mobilizing an army of frontline providers and community networks requires substantial investments and sustained communications efforts. Technical guidelines and tools need to be simple and clear, thereby covering larger geographic areas. The India and Madagascar programs had explicit scaling-up plans from the start, and mechanisms to track quality and coverage as

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8 ENA tools are available from the following sources: (1) BASICS II Tools for Operationalizing Essential Nutrition Actions. Electronic version available at http://www.basics.org/new/tools/ena/index.html. (2) Training Manual for Health and Social Workers in Sub-Saharan Africa: Implementation of the Essential Nutrition Actions will be available in French and English by June 2004 through USAID and BASICS II. (3) SEARO/BASICS II Toolkit, a collection of tools for operationalizing Essential Nutrition Actions in the South East Asia Region, will be available through SEARO/WHO, USAID and BASICS II by August 2004. (4) Madagascar Case Study Toolkit CD, currently available through USAID or BASICS II. (5) Senegal and India Child Survival Case Studies will also have a CD with tools by the end of September 2004, available through USAID and BASICS II.
scaling-up occurred. In all countries, having simple, explicit actions of “what to do, when, where, and how” was critical to being able to scale up.

**Partnership is key.** These country programs have demonstrated that there is no easy or quick way to implement the package of six proven ENA interventions and move from small to large scale. All country programs worked to develop and strengthen strategic partnerships. One of the primary purposes of the partnership was to reach consensus on an approach so that all partners could implement it. In India, by working within the government programs, CARE/India’s INHP II assured built-in partnerships. There is another benefit in a unified vision and strategy—that of reducing confusion and conflicting messages among families and health workers. Madagascar achieved agreement among policy- and decision-makers, as well as program managers and implementers at all levels. In Madagascar, a critical mass of nutrition advocates constituted the driving force through GAIN that fostered agreement on problems and solutions. Networking and coalition-building that allowed the quick spread of key messages and ideas. All nutrition networks, journalists, radio producers, and other groups in the media were involved in all steps. Time and effort was invested in Madagascar in strong partnerships between public and private structures, governmental organizations, NGOs, and university groups.

**Demystifying and defining nutrition while allowing flexibility encourages new partners to become involved.** Because malnutrition is affected by a multiplicity of factors, nutrition programs have in the past tended to discourage action by appearing to be too complex. The ENA framework and tools limited the interventions to a manageable number with explicit guidelines for implementing them. Many of the interventions (e.g., vitamin A, infant feeding, and care of the sick/malnourished child) have alternative approaches that can be adapted depending on the local context, and no one approach is expected to fit in all local settings. The tools, partnerships, and cooperation with the community can be adapted and made to fit local situations even within countries, as in the two different regions in Nigeria. In Senegal, the perception before ENA was that “nutrition” was the only facility-based rehabilitation, and that the other nutrition-related actions (improving BF, for example) were not facility based. Once the ENA package was defined and given a framework, structure, and guidelines, managers and frontline workers from government sectors, NGOs, and other partners could more easily adopt them to fit within their existing work. In India, RCH and ICDS had struggled for years with various separate initiatives and food distribution programs. With a clear refocusing and more specific priorities defined by ENA, they now are able to move forward.

**At State and District Levels**

**Decentralization allows greater flexibility and innovation.** In the CARE/INHP II program in India, decentralization has empowered state-level staff to adapt, innovate, and develop creative solutions to local problems. Contracting with local NGOs helped enrich the program with new approaches. In Madagascar, donors are able to directly fund district programs as a result of decentralization. In Senegal, each district team plans and implements key activities. The Borgou region in Benin led the way for the rest of the country and was able to initiate a distinctly different strategy because of decentralized decision-making.

Without a replicable community model, scale is limited. India’s nationwide ICDS program provided an excellent platform to deliver ENA interventions. In Nigeria, the CAPA mechanism has to be built and streamlined before scaling up. In Senegal, growth monitoring was considered
indispensable until the shortage of scales led to streamlining the model for more rapid expansion. Benin and Madagascar built on communications networks already in place.

**Ensuring adequate supplies is key.** While attention to communication and community-based approaches is appropriate, many of the countries had problems with ensuring the supply of micronutrient supplements or equipment, such as weighing scales. Routine monitoring of health supplies often does not include ENA supply indicators, limiting the capacity of managers to take action in a timely manner.

**Preventive actions should be emphasized while not rejecting curative elements.** Seeing the ENA package rehabilitation of severe malnutrition with the management of sick children encouraged more managers to adopt it as the comprehensive package. Few other nutrition approaches provided both comprehensiveness and specificity in the same strategy. In India, Senegal, Madagascar, and Nigeria, managers and partners responded when they perceived no one vertical initiative was being pushed, but rather a comprehensive way for including the six evidence-based priorities of their nutrition strategy under a single umbrella. India used an innovative lifecycle approach that used age-appropriate messages and interventions as the organizing principle to achieve packaging and integration rather than vertical technical interventions. India, however, did take special measures to move managers away from tracking and responding to the number of malnourished children toward a more truly preventive strategy.

**At Community Level**

**Addressing and monitoring inequity is important.** The ENA approach explicitly gives great emphasis to universal coverage with each of the six essential interventions. The emphasis of all ENA-community components is to reach every mother and child. India specifically developed and implemented a plan to reduce inequity between high- and low-SES (Socio-Economic Status) families within villages. The use a social map appears to have been critical in the initial enumeration of all neighborhoods in the catchment area and can explain, in part, the narrowing in gaps between the poor and better-off families. Assigning CAs to and selection of CAs from all neighborhoods is another component that proactively sought to reduce left-outs and drop-outs from marginalized groups. In Senegal, smaller outlying communities are being linked to health workers with simple tools and frequent meetings with “community resource persons.”

**Any one of the ENA interventions can serve as the entry point.** In Madagascar, BF promotion provided the programmatic entry point and served as common ground for child survival, family planning, and nutrition programs. In Kano, Nigeria, community-based rehabilitation of malnourished children and the PD/Hearth approach are the mobilizing forces that are demonstrating the importance of feeding practices and bringing other interventions along. In India, a lifecycle approach was used, and pregnancy and newborn interventions were the first ones to be emphasized in the training of community CAs. While any one or a combination of the interventions can serve as the entry point, country programs recognize that the ultimate goal is to scale up each of the six interventions for the entire population.

**Community involvement is essential and requires health system support to produce results.** Each of the five country programs developed extensive community programs. The involvement of community groups and community-based field agents improved access to nutrition services, reduced inequity (in India), and was a powerful mechanism for behavior change. However, many
challenges remain in this area. All programs relied heavily on volunteers or community-based workers, and all worked through traditional community networks and structures. All had to fit into broader social sector programs and invested in capacity building for community-oriented institutions. However, without adequate systems support, the community components could not deliver the ENA package alone. Procurement of micronutrients (all countries) and weighing scales (initially, Senegal was dependent on growth monitoring) created limits to expansion. Supervision and training, and the use of ENA indicators in health information systems, required strengthening basic managerial functions in all countries.

**A spirit of volunteerism and presence of grassroots-level organizations can make a big difference.** Like many other community-oriented social sector programs, this factor was highlighted in the Madagascar case. Within countries, such as India, certain areas or ethnic groups have a more cohesive and service-oriented approach that can make a difference. In Senegal, it remains to be seen how ENA needs to be adapted as the program reaches large urban centers (e.g., Dakar and Thies regions).

**Summary**

It appears from the examination of these country programs that, while we have some experience and knowledge in implementing large-scale programs, there is still much room for progress and improvement. The ENA approach has moved existing programs toward larger scale, added greater focus on growth promotion rather than rehabilitation of severely malnourished children, built capacity at systems and community levels, and improved the effectiveness and sustainability by mainstreaming and linking with health services.

In summary, the ENA approach provides health managers and health care workers with a holistic framework for addressing the various aspects of malnutrition in their country. ENA integrated and coordinated existing health contacts and service provisions to include a unified nutrition approach that addresses child nutrition, maternal nutrition, and nutritional care of sick children in combination with other child health interventions. But there is a long way to go before high coverage and penetration within provinces, states, zones, and districts is reached. These countries have made a good start and there are early indications that the six interventions package can be successful. More evidence is needed, however, principally on changes in nutritional status before ENA can be declared a success. Using what we currently know about nutrition and applying the experiences of various countries in implementing and adapting the ENA approach, we do know that we can deliver the cost-effective interventions necessary to save the lives of mothers and children in the developing world and help children grow to their full potential.

**Next Steps**

- The experience of several countries suggests that an approach, like the ENA, that is focused on evidence-based interventions and achieving scale, and one that allows flexibility to build on existing programs and platforms can be an important step toward addressing malnutrition. Countries that have embarked on this approach have important work ahead to maintain the focus on the priority interventions and age groups. The following checklist reflecting key operational components of ENA will need to be completed and maintained:
  - Updated policies and technical guidelines for six interventions
  - Health provider supervision and managers trained in ENA and pre-service curriculum for medical/nursing nutrition schools made consistent with new guidelines
- Capacity built in community-focused organizations and programs to deliver ENA interventions
- ENA indicators routinely reviewed and action taken to expand scale and reach at least 80% coverage within catchment areas
- Advocacy and public education maintained about nutrition and ENA behaviors

New countries with high mortality and malnutrition may wish to adapt ENA for their own use. There is ample evidence in the global literature about the efficacy of the interventions that comprise the ENA. ENA interventions can be expected to improve growth, reduce mortality, improve cognition, and reduce micronutrient deficiencies.

Information must be collected about the magnitude of impacts from the five large-scale programs described in this paper, but this will require massive resources. This review of a series of project adequacy evaluations stops short of measuring impact. Thus, it is important to build on this work and undertake at least a few evaluations to see how effective ENA can be in the real world, and at what cost. Ideally, with/without and before/after evaluation design could be used to gather both quantitative and qualitative data. In one case, CARE/India’s INHP II, such an evaluation is currently under way in collaboration with the Johns Hopkins University with a projected end date of September 2006. It is desperately important for donors to support other countries’ efforts to conduct such evaluations as well.
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