Improving Complementary Feeding Practices: A Review of Evidence from South Asia

Evidence Review Series 2

March 2008

Context

Adequate nutrition during infancy and early childhood is critical to the development of children's full human potential. Poor infant and young child feeding practices, coupled with high rates of infectious diseases, are the proximate causes of malnutrition during the first two years of life. The second half of an infant's first year is an especially vulnerable time, when breast milk alone is no longer sufficient to meet his or her nutritional requirements and complementary feeding should start[39]. Many children suffer from under nutrition and growth faltering during this period, with consequences that persist throughout their life.

Children need complementary foods in addition to breast milk from the age of six months. In India, common problems include the provision of poor quality complementary foods, insufficient amounts of complementary foods, insufficient breastfeeding, detrimental feeding practices, and contamination of complementary food and feeding utensils. In addition, if complementary foods are given too early or too frequently, they displace breast milk, which is of higher nutritional value than other foods.

Child Nutrition in India…

- Of the 19 million infants in the developing world who have low birth weight (< 2,500 grams), 8.3 million are in India. This means that approximately 43 per cent of all the world's infants who are born with a low birth weight are born in India.
- Malnutrition is an underlying cause in up to 50 per cent of all under-five deaths.
- About 55 million, or one-third, of the world's underweight children under age five live in India.

Source: The State of the World's Children 2008

Evidence Review Process

Due to the importance of complementary feeding for improved child health, leaders from the central and state Government, including Health and Family Welfare and Women and Child Development officials, agreed that it was important to conduct an evidence review on this topic. The USAID-funded Vistaar Project facilitated this review, which was conducted by recognized national experts in this field.

The purpose of the evidence review was:

> *Analyze the available evidence to make recommendations to the Government about how to improve complementary feeding.*

The Project team identified existing evidence for the review from India and the South Asia region through a literature review as well as direct requests for information from many experts working in this field. The team initially identified 20 interventions. The team then short-listed 13 interventions based on the criteria that the intervention should have a sound evaluation that documented results at the outcome or impact level (e.g., changed feeding practices, intake of adequate amounts of complementary foods). Due to the need to identify lessons for implementation at large scale, interventions implemented in very small geographic areas were not included in the review.

Most of the 13 interventions applied multiple approaches. The most common approach was community-based Behavior Change Communication (BCC) through household level counseling and education. Some interventions included capacity building of community-level health care providers and a few applied a "positive deviance" approach (promoting positive feeding practices which are identified and accepted locally). See Table 1 for more information on the interventions.

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Table 1: Overview of Interventions

Intervention Name	Lead Agencies	Focus Areas
Kano Parbo Na (Why can't we do it?) –West Bengal Positive Deviance Model [6, 17, 29, 34]	Integrated Child Development Services (ICDS), West Bengal	This intervention, implemented through ICDS, Government of West Bengal, used a positive deviance strategy through a life cycle and community-based approach. (2001-2005)
LINKAGES Project–Mainstreaming BCC for Improving Infant Feeding Practices [1, 40]	World Vision	The intervention tested an innovative behavior change methodology that introduced or reinforced simple, culturally appropriate and nutritionally effective practices. It was implemented across several states in North India. (1997-2004)
Reproductive and Child Health, Nutrition and HIV/AIDS (RACHNA) Program [2]	CARE India and ICDS	The program augmented support to ICDS with additional interventions to support improvements in maternal and child health and nutrition services, behaviors and outcomes, such as promotion of antenatal care and neonatal care, breastfeeding, complementary feeding and child nutrition. The program was implemented across 78 districts (747 blocks) across eight states of India and reached over 103 million people. (2001-2006)
Appropriate Complementary Feeding Practices and Physical Growth in Infants and Young Children [3-5, 11]	Dept. of Pediatrics, All India Institute of Medical Sciences	The intervention aimed to demonstrate and promote exclusive breastfeeding for six months and appropriate complementary feeding practices in under-twos and assessed the available channels for nutrition counselling, their relative performance, and the relationship between intensity of counselling and behaviour change. It was implemented in rural areas of the Faridabad district in Haryana. (1998 – 2002)
LINKAGES Project–Mainstreaming BCC/BCM in a Safe Motherhood and Child Survival Program [1, 7,]	Catholic Relief Services	The intervention facilitated behaviour change through developing prototype BCC messages and materials and training staff in formative research, BCC, and monitoring of BCC activities. It developed a behaviour change model to improve nutritional practices among participants. This program was implemented across four states in India. (2002-2003)
Dular Strategy [13, 28]	UNICEF, ICDS and Govt. of Jharkhand	The Dular strategy adopted a life cycle approach to the care of children under three, improving access to adequate nutrition, health care, and information about childcare to girls and women throughout their lives–especially while they are pregnant and nursing their young children. It was implemented across four districts in Jharkhand. (1999-2005)
Community-Based Mother and Child Health and Nutrition Project [18, 25, 32]	ICDS, Govt. of Uttar Pradesh and UNICEF	The intervention used community mobilization and household level counseling strategies for enhancing complementary feeding practices. It was implemented in Uttar Pradesh. (2001-2004)
Community-Based Child Nutrition Program in Nepal [26, 27, 29]	Save the Children, Japan and Aasaman	Implemented in Dhanusha district in Nepal, the intervention used the positive deviance strategy. (2001-2003)
Anchal Se Angan Tak [10, 20]	Integrated Child Development Services, Govt. of Rajasthan and UNICEF	Implemented in seven districts of Rajasthan, the intervention emphasized household level counseling and center-based health and nutrition education and services. (2001-2006)
ANUKA Project [9, 21, 30, 31]	The Micronutrient Initiative	This intervention focussed on a bimonthly growth velocity assessment and was implemented in the Tonk district of Rajasthan. (2006-2007)
National Nutrition Program in Bangladesh [24, 35, 38]	Govt. of Bangladesh and World Bank	The program focussed on community-based behavior change communication and community mobilization. Implemented in Bangladesh. (2000-2005)
Community-Based Nutrition Education for Improving Infant Growth [19]	Belaku Trust and UNICEF	Implemented in rural Karnataka, the intervention used nutrition education to improve child nutrition and survival. (1998-1999)
Tamil Nadu Integrated Nutrition Program [14, 16]	Dept. of Social Welfare and Women and Child Development, Govt. of Tamil Nadu and World Bank	Implemented in 318 rural blocks in 24 districts of Tamil Nadu, the intervention's key strategies were providing supplementary nutrition for children under 36 months of age and growth monitoring. (1980-1989 and 1990-1997)

The Vistaar Project team prepared a summary of each selected intervention, which included available data in the areas of effectiveness, efficiency and expandability. These summaries were provided to the lead implementing agencies for their feedback and then shared with the expert reviewers prior to the expert review meeting. (These summaries are available on the IntraHealth website: http://www.intrahealth.org) The team worked with Government officials and recognized experts to form a panel of experts in this field to conduct the evidence review. The expert group included Government officials and representatives from NGOs, academia, donors, professional associations, and other sectors. (See Table 2)

Table 2: List of Experts

Dr. Anand Lakshman	The Micronutrient Initiative, New Delhi	**Dr. Panna Choudhury**	Indian Academy of Pediatrics, Mumbai
Dr. Deoki Nandan	National Institute of Health and Family Welfare, New Delhi	**Dr. Prakash V. Kotecha**	Academy of Educational Development, New Delhi
Dr. Deepika N. Chaudhery	The Micronutrient Initiative, New Delhi	**Dr. Rajiv Tandon**	USAID India, New Delhi
Dr. G.S. Toteja	Indian Council of Medical Research, New Delhi	**Dr. Ramesh K Singh**	HOPE Foundation, New Delhi
Dr. M. Bhattacharya	National Institute of Health and Family Welfare, New Delhi	**Dr. Rajan Sankar**	Global Alliance for Improved Nutrition, New Delhi
Dr. Madhu Agarwal	National Institute of Public Cooperation and Child Development, New Delhi	**Dr. Sadhana Bhagwat**	Global Alliance for Improved Nutrition, New Delhi
Dr. Meera Priyadarshi	World Bank, New Delhi	**Dr. Shanti Ghosh**	Senior Nutrition Expert, New Delhi
Dr. Minnie Matthew	World Food Program, New Delhi	**Dr. Shubada Kanani**	M.S. University, Gujarat
		Dr. Subhadra Seshadri	Senior Nutrition Expert, Karnataka

Note: Other invited experts were unable to attend.

Lessons Learned

Seventeen technical experts met for one day on July 18, 2007 to review the 13 selected interventions. The experts worked in a consultative manner and primarily in small groups to achieve the following objectives:

- To analyze the available evidence to determine whether there was an evidence-based model for complementary feeding that could be recommended to the Government for programming at scale
- To identify lessons learned about achieving impact in the area of complementary feeding
- To identify key evidence gaps, where additional knowledge needs to be generated

The experts placed significant focus on the quality of data and results available. They commended the implementing organizations for their evaluation and documentation efforts and the contributions they have made to the evidence base on complementary feeding in India. However, they did not feel the evidence was compelling enough at this point in time to recommend any one approach or model to the Government for adoption at scale. They did make some general recommendations based on the intervention experiences and available evidence, which are listed below.

- The experts felt that further application and review of several models showing some successes would be useful (e.g., *Kano Parbo Na,* Mainstreaming Behaviour Change Communication for Improving Infant Feeding Practices, Appropriate Complementary Feeding Practices and the Dular Strategy)
- They felt that the positive deviance approach had potential and should be further applied and evaluated
- The experts felt it would be quite challenging for the Government to try to adopt donor or NGO-supported pilots, since they are often very intensive and context specific, but they felt that the Government should review and consider lessons from these pilot efforts
- The experts recommended more study and documentation of Government program efforts to improve complementary feeding

Evidence Gaps

The experts identified a number of evidence gaps where more information and data are needed.

- There is a need for more information on implementation processes for complementary feeding interventions; there is more information available on "what" needs to be done to improve complementary feeding, but not enough on "how" to do it
- There is a need for more information on cost and cost-efficiency
- There are not accepted factors or standards for expandability or scalability; there is a need for more evidence on what factors should be used to assess whether a model can work at scale
- Most interventions used multiple approaches to improve complementary feeding so there is a need for monitoring and evaluation data that can shed light on which of these approaches contributed the most to the results; the experts recommended that agencies leading interventions should try to assess the relative contribution of individual approaches to the primary outcome
- There is limited data available to assess which interventions had an impact on equity and gender issues; most interventions did not collect or report data broken down by equity indicators, such as socio-economic measures or caste, and most did not document whether any equity or gender issues were considered in the design or implementation strategies or whether the interventions were able to reach the most vulnerable and marginalized
- There seems to be a shortage of good documentation on interventions implemented by Government which may be partially an issue of access, as some Government evaluations are not made publicly accessible; there is a need for more evaluations of Government programs, more access to these evaluations, and more use of this evidence in programming planning

In Summary

The evidence review process is a useful approach to build consensus among technical experts and program leaders, inform program planning, and assist with decision making. The Vistaar Project experience shows that this process is most valuable when:

- It is conducted in an open, inclusive and participatory manner
- The focus is on learning lessons, not identifying the best model
- The audience is clear, and the evidence is reviewed from their perspective (i.e., in this case, the evidence was reviewed for application in Government programming)

The Vistaar Project greatly appreciated the opportunity to be a part of this evidence review and is honored to join with the technical experts, implementing agencies, and Government program leaders and implementers who are using evidence to improve MNCHN program impact.

INTRAHEALTH INTERNATIONAL

IntraHealth International, Inc.'s Vision

We believe in a world where all people have an equal opportunity for health and well-being.

Mission

To mobilize local talent to create sustainable and accessible health care

The Purpose of the Vistaar Project is:

To assist the Government of India and the State Governments of Uttar Pradesh and Jharkhand in taking knowledge to practice for improved maternal, newborn, and child health and nutritional status

IntraHealth International, Inc. is the lead agency for the Vistaar Project

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