

Finding and Recommendations from a Review of CORE Group Members' Efforts to Improve Exclusive Breastfeeding Coverage

Social and Behavior Change Working Group, CORE Group

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Background:

The *Lancet* series on maternal and child undernutrition estimates that interventions to promote exclusive breastfeeding have the potential to reduce mortality among children under 36 months by 9% (Bhutta *et al*, 2008). Exclusive breastfeeding protects infants against many common childhood diseases including diarrheal and respiratory infections, two of the most important contributors to child mortality (Black *et al*, 2008 and WHO, 2000). A 2009 review of community-based approaches to health by the Task Force on the Effectiveness of Primary Health Care of International Health Section of the American Public Health Association identified promotion of immediate and exclusive breastfeeding as an effective and cost-efficient intervention which should be given priority in programming of community health interventions (Perry *et al*, 2009).

As important as exclusive breastfeeding is to protecting the health of infants, it is not an easy practice to promote effectively. The 2008 UNICEF report *Tracking Progress in Maternal, Newborn and Child Survival* reveals that coverage of exclusive breastfeeding for the first six months of an infant's life in 68 priority countries to be only 28%. Coverage for early initiation of breastfeeding within the first hour after birth was 43% (UNICEF, 2008). Reasons for not practicing exclusive breastfeeding for the recommended first six months of life include cultural beliefs about colostrum that result in delay in initiation of breastfeeding after birth, the mistaken belief that breastmilk is not enough to meet the nutritional needs of an infant during the first six months, lack of social support for women in addressing breastfeeding difficulties, and lack support from the health system (Green, 1999).

Child survival projects that seek to promote healthier behaviors in target populations are increasingly building evidence-based strategies to go beyond simply providing instructions about healthier practices to applying theoretical models (USAID, 2007a). These conceptual frameworks provide guidance for conducting formative research to investigate the facilitating factors and barriers to change confronting individuals, families, communities and health systems and the incorporation of findings from such research into project strategies, activities, messages and monitoring and evaluation. The most commonly applied theories in public health are the Health Belief Model, the Theory of Reasoned Action and Transtheoretical Stages of Change (Glanz *et al*, 2002). A significant body of research indicates that behavior change interventions shaped by such theories are far more powerful than interventions based on assumptions or traditional approaches.

The purpose of this paper is to share the experience of United States Agency for International Development (USAID) Child Survival and Health Grants Program grantees' efforts to promote exclusive breastfeeding. To identify best practices in exclusive breastfeeding promotion, the Social and Behavior Change Working Group of CORE Group reviewed the programmatic approaches of 18 Child Survival projects with a breastfeeding component. The review looked at formative research the projects conducted, the process for developing the social and behavior change strategy, and how the strategy was implemented and monitored. The objective of the review was to identify factors which led to greater success in improving exclusive breastfeeding practices. The review

process included a survey of CORE Group members to identify projects with a significant breastfeeding component, a review of project documents, and in-depth interviews with staff or consultants who implemented or provided technical support for the projects.

The review found the characteristics associated with “high performing” Child Survival projects to have: 1) strong technical support in social and behavior change; 2) quality formative research informing the breastfeeding promotion strategy; 3) use of the BEHAVE Framework¹ in developing the social and behavior change strategy; 4) implementation closely following the design; and 5) more frequent and comprehensive monitoring and evaluation, using feedback from monitoring to adjust the project strategy and implementation.

Methodology:

The Most Powerful to Change sub-group of the Social and Behavior Change Working Group conducted a systematic review of CORE Group members’ experience to promote exclusive breastfeeding to identify design and implementation factors associated with greater increases in rates of exclusive breastfeeding as assessed by the baseline and endline Knowledge, Practice and Coverage (KPC) surveys. Sub-group members included six community health professionals representing CARE, Concern Worldwide, Food for the Hungry, Helen Keller International, Medical Teams International and World Relief.

A total of 18 Child Survival projects with a substantial breastfeeding component were identified through three mechanisms: a survey disseminated on the CORE Group list serve; the Child Survival Technical Support (CSTS) database; and referrals from the CORE Group Nutrition Working Group. The projects were implemented in a variety of geographic regions – six from East Asia; three from Central Asia; four from Latin America and Caribbean; and five from Africa.

To assess whether projects were high or low performing, a “difference index” was calculated for each project. The difference index was calculated by subtracting the exclusive breastfeeding rate as measured by the baseline survey from the rate measured by the final survey². A large difference between the baseline and final survey rates indicated strong performance while a small difference suggested little impact had been made. The six projects with the highest difference indices were classified as high performing and the six with the lowest indices as low performing. The average difference index for all 18 projects was .32. High performing projects had an average difference

¹ The BEHAVE Framework was originally developed by the Academy for Educational Development (AED) and later modified by CORE Group members for use in international community health programs. The framework employs easy-to-use tools based on principles of behavioral science to help project designers make strategic decisions about: the primary target groups for behavior change communications; the actions to be promoted to achieve desired behavior change; the psychosocial, structural and other determinants that have the strongest influence on the target group’s choice to act; and the most effective strategies for addressing those determinants.

² It should be noted that the standard KPC question administered to mothers of children less than 24 months of age is the mothers’ report of all liquids and foods given to the child in the previous 24 hour period. It thus overestimates the true proportion of infants exclusively breastfed as it represents just one 24-hour period, is calculated on a subset of the survey sample, includes a cross section of infants under six months, and is based on mothers’ report rather than observation. Nevertheless, experts have agreed this indicator represents the best option for estimating exclusive breastfeeding and that it is sensitive to capturing changes (WHO, 2008).

index of .63 and low performing projects an average of .08. Eleven NGOs were represented in the review with one NGO having both a high performing project and low performing project.

The review team also calculated a “performance index” for each project, which represents how much a project achieved compared to the maximum possible achievement. This index was calculated by dividing the absolute achievement (the difference index) by the maximum possible achievement (the difference between baseline and 100%). High performing projects had an average performance index of .76 and low performing projects .14.

Team members reviewed project documents for each of the twelve high and low performing projects including detailed implementation plans, mid-term and final evaluation reports. A matrix was designed to guide and organize information to be extracted during the review. The review focused on examining baseline and end line results, types of formative research conducted, processes used to develop behavior change strategies, the degree of effort put into social mobilization, as well identifying internal and external factors that may have affected performance, including management and technical support the project received and changes during the project cycle in national policies affecting breastfeeding promotion.

Following document review, members of the sub-group conducted in-depth interviews with project or headquarters staff that had provided technical support or managed the project. If project or headquarter staff were not available, consultants who evaluated the projects were interviewed. Each member investigated one high performing project and one low performing project. Three of the twelve projects reviewed were implemented by organizations to which a working group team member belonged. To prevent organizational bias, these projects were assigned to sub-group members who were not from the implementing organization. To provide continuity; however, the team member associated with the project participated in the interview.

Findings:

A summary table presenting the findings from the document review and in-depth interviews is presented in Annex 1. The factors identified as significantly contributing to the success of high performing projects include conducting detailed formative research and incorporating the findings in shaping the project strategy, providing strong technical support in social and behavior change, and using the BEHAVE Framework to develop a social and behavior change strategy. The strategies of high performing projects also included effective peer education and social support components through support groups and one-on-one counseling using the Care Group or Baby Friendly Hospital Initiative approaches and home visiting strategies which reached women in the context in which they were attempting new behaviors.

Five of the six high performing projects received technical support and training in social and behavior change and/or the BEHAVE Framework, while the remaining project received training in communication skills and counseling. Of the six low performing projects, only two received technical support in this area. One had limited technical support in behavior change provided by another NGO in country and a second project was provided with training in adult learning and designing of health messages.

The high performing projects conducted more comprehensive, high quality formative research and made a concerted effort to apply the research findings to the breastfeeding promotion strategy. Five

of the six high performing projects used three or more forms of research, such as focus group discussions, doer/non-doer surveys, key informant interviews, Positive Deviance Inquiry, measuring key determinants through a KPC survey, and health worker attitude survey. Only two of the low performing projects, on the other hand, conducted more than two types of formative research, and the application of findings to project strategy was often vague.

The type of formative research conducted by the projects also differed. Five of the six high performing projects conducted doer/non-doer analysis studies or used a similar method such as Barrier Analysis compared with only two low performing projects. Four out of the six high performing projects conducted qualitative research with influential groups including men, mothers in law, and health facility staff. Two low performing projects, on the other hand, interviewed midwives or health agents but did not interview family members.

The application behavior change theories and design tools was also associated with level of performance. All six high performing projects used the BEHAVE Framework to design a social and behavior change strategy, while only one low performing project did so. Three high performing projects also used the Health Belief Model, Bandura's Theory of Reasoned Action or Stages of Changes to inform their strategies compared with only one low performing project.

High performing projects designed behavior change strategies targeting a larger number and greater variety of key determinants. High performing projects targeted an average of four key determinants per project, while low performing projects targeted an average of two key determinants. All six high performing projects targeted *positive and/or negative consequences* (an individual's anticipated result of performing the desired practice), versus just three out of six low performing projects. Four high performing projects targeted *self efficacy* (an individual's belief he/she is able to perform a behavior), compared with two low performing projects. Eleven of the twelve projects targeted *social norms* (what is expected or perceived to be expected in regards to the desired practice based on the group's standard or tradition).

Evaluations of all six high performing projects suggested they had addressed key determinants with appropriate activities, while only one low performing project was evaluated as having linked key factors to activities in a structured way. Five high performing projects utilized support groups to promote exclusive breastfeeding, three of which used the Care Group model and the other two the support group model promoted within the Baby Friendly Hospital Initiative. Two low performing projects included support groups in their social and behavior change strategies, one using the Care Group approach and the other La Leche League Model for community-based, mother-to-mother support groups.

Five high performing projects implemented home visits while only one low performing project did so. Three of the projects which implemented home visits ensured complete coverage of targeted mothers by using the Care Group approach and a fourth by using community registers to track home visits. The low performing project which used the Care Group model ensured coverage with the census-based, impact-oriented (CBIO) approach³.

³ Identifying the entire program population through visits at least biannually to all homes and then targeting selected high-impact services to those at highest risk (Perry 1998).

Four high performing projects provided training for health staff in breastfeeding counseling while only two low performing projects included training on breastfeeding counseling in their strategies.

High performing projects monitored the behavior change strategy more frequently and used a wider variety of measurements than low performing projects. High performing projects used a combination of methods, including measuring rates of exclusive breastfeeding and quality of implementation of and household coverage of project activities. High performing projects monitored the strategy 2-4 times per year. With one exception, low performing projects relied primarily on baseline and final surveys and midterm and final evaluations to monitor implementation.

Summary of Findings:

While quantitative data was not collected to prove statistical significance, this review of the programmatic approaches of 12 Child Survival projects suggests several project elements which appear to have contributed to greater improvements in rates of exclusive breastfeeding. It seems likely that:

1. Following best practices at each stage of the project cycle, from project design and implementation to monitoring and evaluation, and using findings from monitoring and evaluation to adjust project strategy ensured greatest impact.
2. Projects that evidenced greatest improvements in breastfeeding practices between baseline and endline (between 48 and 89 percentage points increase in rates of reported EBF) were more likely than those with lower rates of change (-2 to 19 percentage points) to employ expert technical assistance, social and behavior change theory, and tools such as the USAID/CORE BEHAVE Framework, doer/ non-doer surveys, and Barrier Analysis.
3. Successful projects implemented comprehensive formative research to inform the design of behavior change strategies, applied the findings to the project strategy, and followed through with careful implementation of the planned strategies.
4. High performing projects identified and strategically addressed a greater numbers of key determinants of exclusive breastfeeding.
5. Strategies of high performing projects were more likely to include home visits and support groups to help mothers try and succeed at breastfeeding. Their home visiting strategies were systematic and provided full population coverage. They also included effective community mobilization and social support components through support groups using the Care Group or Baby Friendly Hospital Initiative approaches.
6. High performing projects were more likely to closely monitor project implementation and make programmatic corrections when necessary.

Discussion:

Most likely it was a combination of the above key elements that came together to strengthen project outcomes in breastfeeding practices. Continuity in project staff also appeared to play a key role in

the more successful project. Accumulating experience with applying behavior change theory to public health interventions suggests that applying components from multiple theories to tailor strategies to specific public health problems assists project staff to design and implement more effective programs (FHI, 2002; Glanz, 2002). Addressing multiple determinants of behaviors simultaneously may also spur greater change overall.

“Negotiating for behavior change” with individual mothers is a methodology promoted by a number of programs, including the Linkages Project and the Essential Nutrition Actions framework, based on the theory that opening a dialogue with mothers in their home settings about trying a recommended practice and then supporting them as they discover for themselves the advantage of the practice, has also proven to be effective (Linkages, 2004; Quinn *et al*, 2005). This approach during home visits and support groups may have contributed to greater uptake of exclusive breastfeeding practices in the higher performing projects. It may also have helped mothers overcome breastfeeding problems they encountered and build self-efficacy in breastfeeding, the importance of which there is also considerable evidence (Britton J and Britton H, 2008 and Nichols *et al*, 2007).

Home visits and breastfeeding support groups also provide opportunities to establish social support for breastfeeding mothers. Home visits can be a forum to educate family members, especially the husband and mother in law, on what a breastfeeding woman needs and enlist their support in meeting these needs. Breastfeeding support groups provide a safe environment for women to share breastfeeding information and personal experiences, support each other, and learn from each other. They allow women to reflect on their experience, difficulties, popular beliefs, and receive accurate information.

Finally, tracking the delivery of project interventions to ensure the quality of implementation and address weaknesses as they arise has also been identified as an essential element to successful project performance (USAID, 2007b). There is also a growing emphasis on using program theory (Rossi *et al*, 2004) to define the steps by which nutrition interventions are expected to be delivered and the pathways through which they are expected to lead to impact, then using this theory as a basis of monitoring and evaluating the success in both “process” and “impact” (Loechl *et al* 2009). This approach would also yield rich data for future analyses of this kind.

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Annex 1: Summary of Findings from Document Review and In-Depth Interviews

	Country	Formative research conducted	Was research applied?	Tools and theories applied	Key determinants targeted	Key activities implemented	Did activities address key factors?	Technical Support and Capacity Building provided for project staff and partners in Social and Behavior Change	Quality of monitoring	Performance Index	Difference Index	Level of Change
Project 1	Cambodia	<ol style="list-style-type: none"> Focus group discussions with men, mothers and mothers in law Doer/non-doer surveys Key informant interviews 	Informed detailed implementation plan and selection of technical resources	<ol style="list-style-type: none"> BEHAVE framework Health Belief Model 	<ol style="list-style-type: none"> Perceived exclusive breastfeeding efficacy Positive and negative consequences Perceived susceptibility Cues for action Social norms 	<ol style="list-style-type: none"> Care Groups Home visits Health education Testimonials 	Yes	Child Survival staff provided with training in behavior change, BEHAVE framework and Care Group methodology	High quality – assessed rates every 6 months, quality monthly and reach every 6 months	.98	0.89	High performing
Project 2	Mozambique	<ol style="list-style-type: none"> Barrier Analysis Determinants of self-efficacy & perceived benefits measured through Knowledge, Practice and Coverage surveys Doer/non-doer Positive Deviance Inquiry 	BEHAVE framework translated into counseling & training tools	<ol style="list-style-type: none"> BEHAVE Health Belief Model Bandura's Theory of self efficacy 	<ol style="list-style-type: none"> Self efficacy Positive and negative consequences Perceived susceptibility Divine will Social norms 	<ol style="list-style-type: none"> Care Groups Home visits Illustrated job aids 	Yes	Project and Ministry of Health staff trained in behavior change communication skills, BEHAVE framework and working with communities	High quality – assessed rates every 6 months, quality every 6 months with quality improvement verification checklists, and reach every 6 months	0.72	0.60	High performing

	Country	Formative research conducted	Was research applied?	Tools and theories applied	Key determinants targeted	Key activities implemented	Did activities address key factors?	Technical Support and Capacity Building provided	Quality of monitoring	Performance Index	Difference Index	Level of Change
Project 3	Kyrgyzstan	<ol style="list-style-type: none"> 1. Focus group discussions with health facility staff, mothers, men, mothers in law, and youth. 2. In-depth interviews 3. Doer/non-doer surveys 4. Health facilities assessment 	<ol style="list-style-type: none"> 1. BEHAVE Framework 2. New messages were developed, harmonized and delivered through multiple channels 3. 2 hospitals were certified became baby friendly 	Baby Friendly Hospital Initiative (100% of deliveries in facilities covered)	<ol style="list-style-type: none"> 1. Social norms 2. Positive consequences 	<ol style="list-style-type: none"> 1. Baby Friendly Hospital Initiative 2. Support groups based on Baby Friendly Hospital Initiative 3. Health agent training 4. Harmonized health education messages 5. Targeted mothers in law, fathers, health providers 6. Involvement of religious leaders 7. Visual aids 	Yes	Health workers and community volunteers, and religious leaders provided with training on communication and counseling	<p>Good Quality - Quarterly monitoring of rates and quality</p> <p>Reach was not measured but since most mothers delivered in hospital, most mothers were reached</p>	0.66	0.58	High performing
Project 4	Tajikistan	<ol style="list-style-type: none"> 1. Focus group discussions with mothers and men 2. Doer/Non-Doer surveys 3. Group interviews with mothers-in-law, 4. Health Worker Attitude 	Findings informed BEHAVE framework	<ol style="list-style-type: none"> 1. BEHAVE 2. Stages of Change theory 3. Theory of Reasoned Action 	<ol style="list-style-type: none"> 1. Positive and negative consequences 2. Policy 3. Perceived action efficacy 4. Social Norms 5. Self-efficacy 	<ol style="list-style-type: none"> 1. Home visits, coverage ensured by using community registers 2. Support groups using Baby Friendly Hospital Initiative 3. Health education visuals 4. Health 	Yes	Project and Ministry of Health staff provided with training in social and behavior change and BEHAVE framework	<p>Good Quality – assessed rates and reach at baseline, midterm and final</p> <p>Assessed quality quarterly using quality improvement verification checklists during education sessions</p>	0.74	0.48	High performing

		Survey				provider counseling						
	Country	Formative research conducted	Was research applied?	Tools and theories applied	Key determinants targeted	Key activities implemented	Did activities address key factors?	Technical Support and Capacity Building provided	Quality of monitoring	Performance Index	Difference Index	Level of Change
Project 5	Senegal	<ol style="list-style-type: none"> 1. Focus Group discussions with mothers, community leaders , men and community health workers 2. Doer/ non-doer surveys 3. Key informant interviews 	Formative research informed the behavior change framework and activities most effective in addressing key factors	BEHAVE framework	<ol style="list-style-type: none"> 1. Self-efficacy 2. Social support 3. Positive and negative consequences 4. Social norms 	<ol style="list-style-type: none"> 1. Maternal Care Groups, based on Care Group approach 2. Health provider counseling 3. Community theater 4. Peer education 5. Home visits 	Yes	Project and Ministry of Health staff provided with training in behavior change and BEHAVE framework	<p>Very good quality: <u>Rates</u> - Baseline, midterm and final Knowledge, Practice and Coverage surveys</p> <p><u>Quality</u> – Close supervision of health facility staff, TBAs and Maternal Care groups</p> <p><u>Reach</u> - Monthly reports</p>	.84	.64	High performing
Project 6	Sierra Leone	<ol style="list-style-type: none"> 1. Focus group discussions 2. Key informant interviews 	Results from knowledge, practice and coverage survey and qualitative research were used to develop a behavior change framework during 2 stakeholder planning meetings.	BEHAVE Framework	<ol style="list-style-type: none"> 1. Self-efficacy 2. Breast feeding efficacy 3. Social support 4. Positive and negative consequences 5. Social norms 	<ol style="list-style-type: none"> 1. Mother to Mother Breast feeding support groups 2. Home visits 3. Health education visuals 4. Training in counseling for traditional birth attendants and primary health care unit staff 5. Radio and community theater 	Yes	Child Survival staff provided with training on behavior change and the BEHAVE framework	<p>Good quality: <u>Rates</u>: Baseline and final Knowledge, Practice and Coverage surveys and Lot Quality Assurance Sampling survey every six months</p> <p>Reach: Lot Quality Assurance Sampling survey every six months</p> <p>Quality: Focus group discussions at baseline and final</p>	.65	.60	High performing

	Country	Formative research conducted	Was research applied?	Tools and theories applied	Key determinants targeted	Key activities implemented	Did activities address key factors?	Technical Support and Capacity Building provided	Quality of monitoring	Performance Index	Difference Index	Level of Change
Project 7	Guatemala	<ol style="list-style-type: none"> Barrier Analysis Focus group discussions with mothers and midwives Positive deviance inquiry 	Findings were applied to modify Care Group materials	<ol style="list-style-type: none"> Health Belief Model Theory of Reasoned Action Care Groups 	<ol style="list-style-type: none"> Positive and negative consequences Exclusive breastfeeding efficacy Social norms Divine will 	<ol style="list-style-type: none"> Care Groups Home visits Census Based Impact Oriented (CBIO) Approach 	Only positive and negative consequences targeted	Provided with training on adult learning and development of health messages	Monitoring tools were in place to measure rates, reach and quality but data not analyzed and used to inform project	0.27	0.19	Low performing
Project 8	Vietnam	<ol style="list-style-type: none"> Focus group discussions with mothers Behavioral Determinant Study key informant interviews 	Unclear	Unclear	Social norms	<ol style="list-style-type: none"> Support groups Baby Friendly Hospital Initiative Testimonials 	Targeted social norms only	Not provided with technical support In social and behavior	Rates were measured twice using Knowledge Practice and Coverage survey , quality 3 times using focus group discussions. Reach measured once through Knowledge, Practice and Coverage survey	0.21	0.13	Low performing
Project 9	Indonesia	Positive deviance inquiry	Through detailed implementation plan workshop	BEHAVE framework	<ol style="list-style-type: none"> positive and negative consequences Social norms 	Promotion through midwives and community volunteers	Only positive and negative consequences addressed	Limited technical support on social and behavior change provided in country	<p>Rates measured at baseline, midterm and final</p> <p>Quality and reach not measured</p>	0.12	0.06	Low performing

Project 10	Nicaragua	Semi-structured interviews with key informants	No; conducted towards end of project	None	Possibly policy	1. Counseling/health education 2. Peer education	No	Not provided with technical support In social and behavior change	Rates were assessed at baseline, midterm and final	-0.045	-0.02	Low performing
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	Country	Formative research conducted	Was research applied?	Tools and theories applied	Key determinants targeted	Key activities implemented	Did activities address key factors?	Technical Support and Capacity Building provided	Quality of monitoring	Performance Index	Difference Index	Level of Change
Project 11	India	1. Focus group discussions with health agents 2. Doer/Non-doe surveys	Applied doer/non-doe findings to strategy	Timed to life cycle and targeted counseling	1. Self efficacy 2. Positive and negative consequences 3. Social norms	1. Peer education 2. Visual aids 3. health provider counseling	Yes	None mentioned in project documents	Rates were measured bi-annually, quality measured monthly and coverage ensured through registries	0.24	0.12	Low performing
Project 12	Madagascar	Knowledge, Practice and Coverage surveys	Findings were not applied	Used Community Integrated Management of Childhood Illnesses strategy developed by Ministry of Health	Social norms	1. Radio 2. Print materials 3. Community health education by agents de santé 4. Mobile community sensitization	No	Not provided with technical support in social and behavior change	Rates assessed through Knowledge, Practice and Coverage and Lot Quality Assurance Sampling survey at baseline, midterm and final From the mid term evaluation report: "The mid-term review did not note any specific tools that are being used to capture impact of behavior change materials and interventions. Thus there is not yet a sufficient body of data on the effects of the behavior change interventions."	0.04	0.02	Low performing