Final Report

FOLLOW-UP SURVEY III: A RAPID APPRAISAL OF BREASTFEEDING AND COMPLEMENTARY FEEDING KNOWLEDGE AND PRACTICES IN GHANA

GHS/LINKAGES & PARTNERS IN GHANA

By

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LIST OF ABBREVIATIONS AND ACRONYMS

ACDEP	Association of Church Development Projects
AED	Academy for Educational Development
BCC	Behaviour Change Communication
BF	Breastfeeding
CF	Complementary Feeding
CRS	Catholic Relief Services
DHMT	District Health Management Team
DHS	Demographic and Health Survey
EBF	Exclusive Breastfeeding
EBR	Exclusive Breastfeeding Rate
FACS	Food Assisted Child Survival
FTFSG	Father-to-Father Support Group
GHS	Ghana Health Service
GRCS	Ghana Red Cross Society
IYCF	Infant and Young Child Feeding
MTMSG	Mother-to-Mother Support Group
NGO	Non-Governmental Organisation
ORS	Oral Rehydration Salt
ORT	Oral Rehydration Therapy
RAP	Rapid Assessment Procedure
RHMT	Regional Health Management Team
TIBF	Timely Initiation of Breastfeeding
TCF	Timely Complementary Feeding
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development

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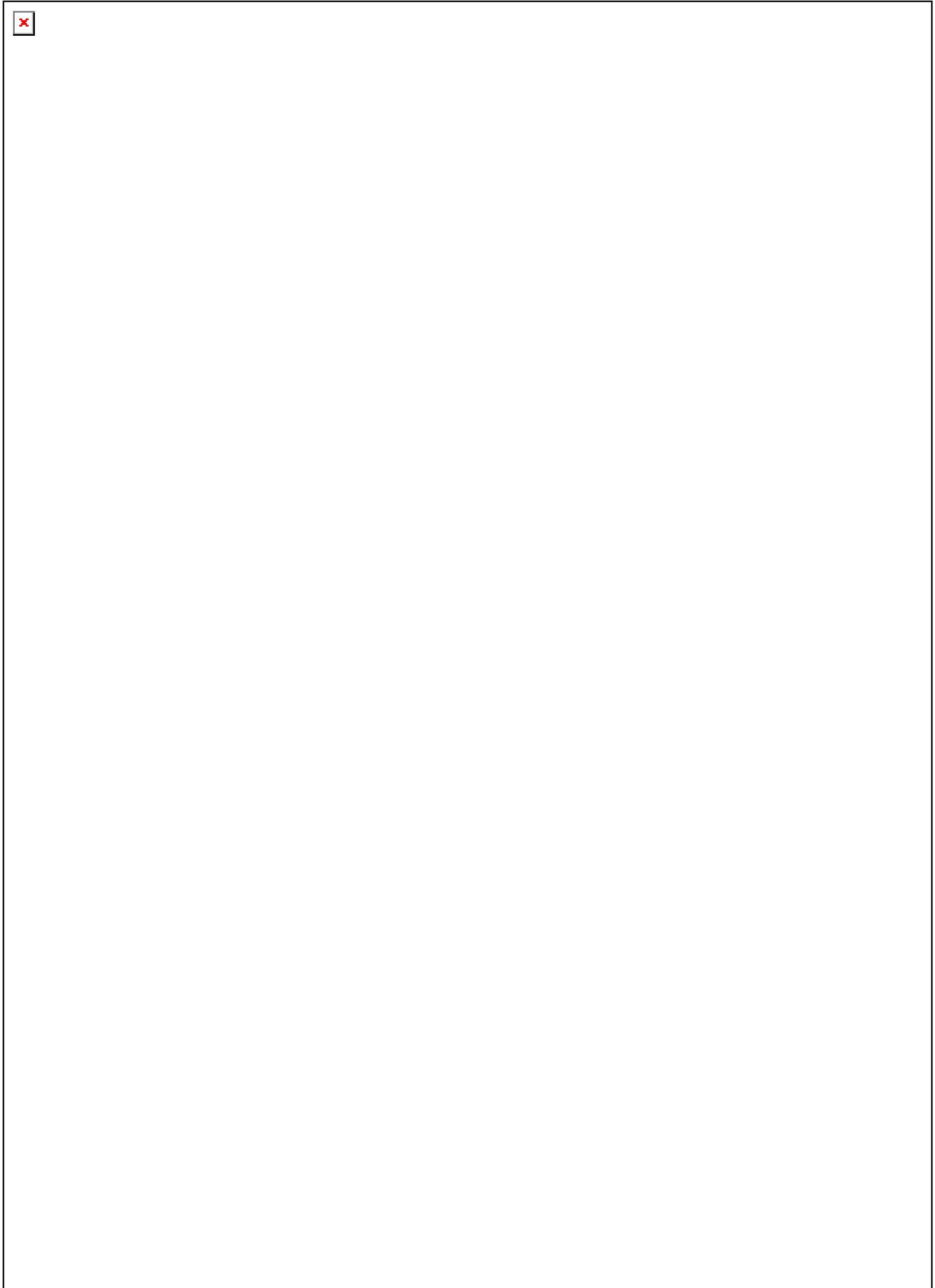
MAP OF GHANA



EXECUTIVE SUMMARY

BACKGROUND:

LINKAGES, a USAID-funded project managed by the Academy for Educational Development (AED) and the Ghana Health Service (GHS) have been jointly implementing a national nutrition Behaviour Change Communication (BCC) program aimed at making significant improvements in the nutritional status of Ghanaian children by promoting early initiation of breastfeeding, exclusive breastfeeding for the first six months of life, and timely and adequate complementary feeding. The program is multi-dimensional and includes the development of community level interventions with partners, advocacy and information dissemination and pre-service curricula reform and development with schools of medicine, midwifery, nursing, public health and others.

The community component of the program began in the year 2000 in the Upper East, Upper West and Northern Regions of Ghana where malnutrition rates were most acute according to the 1998 Ghana Demographic and Health Survey (DHS). In 2000, the GHS/LINKAGES worked closely with three organisations and radio stations to implement nutrition BCC activities in nine districts situated in the three northern regions. The project expanded its network of partners in 2001 and 2002 and in doing so, extended activities to cover 22 out of 24 districts in the three northern regions. Currently the project covers all 24 districts in the three northern regions and has 14 participating partner organisations.

Since 2000, the GHS/LINKAGES Project has conducted annual rapid appraisal procedures (RAPs) in the three northern regions to measure program indicators. Results of these surveys have been useful for informing the GHS/LINKAGES and its partners on progress being made and influenced the way forward. This reports summaries the results of the last of such surveys conducted in December 2003.

METHODS:

The survey was a cross sectional survey of 1200 mothers of children 0-<12 months of age to measure the major indicators of the GHS/LINKAGES program. It covered 17 partner intervention districts and two non-intervention districts in the north and three districts in the Brong Ahafo Region in southern Ghana. In addition, the survey gathered information from secondary target audiences – namely grandmothers (120) and fathers (120) – on their attitudes and knowledge toward child feeding. Similar to the survey that took place late in 2000, the current survey compared results of intervention districts (program) to those of non-intervention districts (control).

RESULTS:

Considering that there was no baseline survey conducted by the project when the program began, results of this survey are compared with data from the 1998 DHS as well previous RAPs conducted by the project. During a one-year period, the exclusive breastfeeding rate (EBR) increased 7% from 72% in 2002 to 79% in the current study in program areas. Since the 2000 RAP which was carried out after the program had been in operation for less than a year, EBR increased by 11% from 68% to 79%. In control districts EBR also increased by 25% from 44% in 2000 to 69% in 2003 perhaps indicating an overall positive trend toward exclusive breastfeeding in the country. Concerning initiation of breastfeeding, 41% of mothers in program districts put their babies to the breast within the first hour of delivery (TIBF) compared to only 14% in control districts. In program districts, results of the current

survey show an 8% decline in TIBF from 49% in 2002. The interpretation of TIBF results however needs to be done with caution as the use of proxies in estimating the rate varied between 2002 and 2003. Nevertheless, 90% of newborns are put to the breast within the first day of delivery as opposed to only a half (54%) in control districts. It is also encouraging to note that although breastfeeding was initiated late for a greater proportion of newborns, only one fifth of these infants (19% in program and 16% in control districts) received prelacteal feeds. Cultural practices and beliefs, which hinder early initiation, still appear to persist in some districts and need to be addressed. The 1998 DHS showed that a quarter of infants were put to the breast within the first hour of delivery.

Timely complementary feeding (TCF) rose 8% from 71% in 2002 to 79% in 2003 in program districts. Comparing results with data captured in the 2000 RAP, TCF increased, but not significantly in program communities from 74% to the current figure of 79%. In control districts TCF decreased by 10% during the period 2000 to 2003. The 1998 DHS puts TCF at 63%. The proportion of children 0-< 12 months that received semi-solids regularly before six months of age decreased by almost half in program districts from 38% in 2000 to 21% in 2003. In control districts a decrease of 32% from 75% in 2000 to 43% in 2003 was observed.

Some challenges however remain with complementary feeding. Only about one half of children aged 6-<12 months who received koko had it enriched with recommended nutrient and energy dense items in both program and control districts. Over the years a steady decline in enrichment of porridges is observed. It is not clear whether mothers understand koko to mean all forms of porridge (whether from fermented corn dough or weanimix). It is recommended that porridge made from fermented dough be enriched but not necessarily for weanimix because the maize-legume mix gives good protein enrichment. Less than 40% of children were offered food other than porridge in a separate bowl as recommended. Although fewer children from control districts were offered food at recommended frequencies than in program districts, generally mothers reported offering food fewer than the recommended number of times. It is possible that mothers did not consider snacks when asked how often they offered food to their children. This needs to be looked into further.

Rapid Appraisal 2000, 2001, 2002 and 2003 Results

Indicators	**DHS**	**Program**					**Control**	
	1998	2000*	2001*	2001**	2002	2003	2000	2003
TIBF (%)	25	32	62	54	49	41	14	14
EBR (%)	31	68	78	59	72	79	44	69
TCF (%)	63	74	60	66	71	79	74	64

** Baseline data was captured in districts of new partners (ACDEP, FFH, ActionAid, NewEnergy, WVI, and the WFP

* Survey was conducted in districts of three original partners (CRS, GRCS, UNICEF)

Health workers and the radio are major sources through which target audiences get information on infant and young child feeding. Nevertheless family members and other community networks are also important channels of information. Diarrhoeal disease prevalence in the two weeks preceding the interview was reported to be significantly lower among exclusively breastfed children (15%) compared with non exclusively breastfed children (29%) in program districts.

CONCLUSIONS AND RECOMMENDATIONS:

Improvements made in the infant and young child feeding (IYCF) over the years in the north can be attributed to the contributions of the GHS, LINKAGES and all of LINKAGES' partner organisations. While LINKAGES has organised over a dozen workshops on IYCF and sponsored about 500 radio programs in the north, the GHS and NGO partners have employed innovative combinations of approaches to promote optimal IYCF behaviours including educational sessions at facility based and outreach clinics, home visits, community festivals, meetings of Mother-to-Mother Support Groups (MtMSGs) and Father-to-Father Support Groups (FtFSGs), folklore drama and song, and food demonstrations and others that combine nutrition with ongoing agriculture and education activities. Partners are encouraged to sustain the program and gains achieved through these approaches. Health workers and partner networks need periodic training to up-date their knowledge and skills so they can impart appropriate messages to community members. Regular monitoring of their activities should receive attention if the program is to be sustained. More work is also needed in initiating breastfeeding in a timely manner and enriching porridges for children.

Although there was diffusion of messages through the radio to at least one control district, credit is given to the GHS for its work in improving IYCF behaviours in control districts. There seems to be a general positive trend towards better exclusive breastfeeding practices.

1.0 INTRODUCTION

Malnutrition has been reported globally to be responsible directly or indirectly for 60% of the 10.9 million deaths annually among children under five[1]. It is also estimated that over two-thirds of these deaths, which are often associated with inappropriate feeding practices (not exclusive breastfeeding, too early or too late complementary feeding, foods often nutritionally inadequate and unsafe) occur during the first year of life. Children who survive malnutrition manifested as stunted growth, wasting and micronutrient deficiencies suffer irreversible intellectual and developmental damage. The 1998 DHS reports that although almost all mothers breastfeed, the period that elapses between birth and the child's first breastfeed varies. About 25% of women initiate breastfeeding within the first hour after birth[2]. Exclusive breastfeeding for the recommended six months is not practiced, largely due to the introduction of water and other fluids at an early age. The data further indicates that by 24 months of age, over one-fourth of Ghanaian children are stunted, with the highest rates of stunting reported in the three northern regions of the country where LINKAGES has been working with partners.

To contribute to the Ministry of Health (MOH) strategy of improving child health in Ghana that has breastfeeding promotion as one of its objectives, the MOH Child Health Task Force and the USAID-Mission in Ghana issued an invitation in 1998 to LINKAGES, a USAID-funded project managed by the Academy for Educational Development (AED) to implement a national Behaviour Change Communication Program.

LINKAGES' main counterpart is the GHS/Nutrition Unit, although the program collaborates with a number of the GHS units including the Reproductive and Child Health Unit, the Health Education Unit and the Human Resources Division. Intensive community level work with partners – the GHS through Regional, District and Sub-district Health Teams, Catholic Relief Services (CRS), The Ghana Red Cross Society (GRCS), and UNICEF began in early 2000 in nine districts of the three northern regions.

In the years 2001 and early 2002, the GHS/LINKAGES Project expanded its program activities to cover 22 out of 24 districts in the three northern regions and now has 14 collaborating partners including six new NGOs namely the Association of Church Development Projects (ACDEP), Freedom From Hunger (FFH), ActionAid, NewEnergy, World Vision International (WVI), the World Food Program (WFP), four local radio stations and the University for Development Studies (UDS). Some of the partner NGOs such as ACDEP, FFH and ActionAid actually represent or help support a number of smaller NGOs, Rural Banks or district level initiatives to promote better infant feeding[3].

As part of the planned activities, rapid appraisal procedures (RAP) were undertaken in the years 2000, 2001 and 2002 in partner coverage districts to measure three key outcome indicators for the program. These are, timely initiation of breastfeeding (TIBF) rate, exclusive breastfeeding rate (EBR) of infants 0-<6 months of age, and timely complementary feeding (TCF) rate of children 6-<10 months of age. A fourth follow-up survey took place in December 2003 to look at trends in these rates over time in partner intervention areas (program) and to compare rates to areas that had received minimal program intervention prior to the survey (control). This report summarises the results of this most recent survey.

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[1] WHO, UNICEF. Global Strategy for Infant and Yong Child feeding. 2003

[2] Ghana Statistical Service (GSS) and Macro International Inc. (MI). 1999. Ghana Demographic Health Survey 1998. Calverton, Maryland: GSS and MI.

[3] See Appendix B and C for an overview of partner programs and partner networks

2.0 OBJECTIVES OF THE SURVEY

The primary objective of this survey was to measure the rates and observe trends for the major indicators for the GHS/LINKAGES program in Ghana. They are:

1. TIBF rate of infants 0-<12 months of age
2. EBR of infants 0-<6 months of age
3. TCF rate of children 6-<10 months of age

The secondary objective was to collect information on recall and recognition of breastfeeding and complementary feeding messages and behaviours from the radio and other information channels by mothers of children 0-<12 months of age, grandmothers and fathers. Additionally, data was gathered from mothers of children 0-<12 months of age on diarrhoeal disease prevalence, and management of common breastfeeding problems. The results from this survey will help LINKAGES, the GHS, and implementing partners to continuously fine tune programs that address the promotion of optimal child feeding practices in the coverage areas.

3.0 METHODS

3.1 Survey design and Sampling

The survey was a cross-sectional survey of 1200 mothers of children aged 0-<12 months, 120 grandmothers, and 120 fathers, to assess breastfeeding and complementary feeding practices and behaviours in 19 of 24 districts located in the three northern regions of Ghana and three districts of the Brong Ahafo Region where representatives of GRCS were trained in IYCF in September 2003 and were just beginning activities[4]. Two districts, Bole in the Northern Region and Sissala in the Upper West Region, were areas that had had no program presence since the year 2000 and hence served as control areas together with the GRCS sites in the Brong Ahafo Region. A stratified multistage cluster sampling was used to take separate samples for program and control areas.

Within each partner coverage area, communities in which optimal IYCF behaviours were reported to be promoted were identified and listed. This list constituted the sampling frame from which the communities were randomly selected. Ten clusters were selected from communities within each partner area and ten clusters each from Bole and Sissala Districts and the Brong Ahafo Region. From each selected cluster, households were randomly selected and screened to identify ten mothers of children aged 0-<12 months. To obtain adequate numbers of respondents for each key indicator, six mothers of children 0-<6 months and four of age 6-<12 months were selected from each cluster. From each household only one child was included in the survey. In 10% of all households with eligible children, the father and/or the grandmother of the child was interviewed to obtain information about their knowledge and attitudes regarding breastfeeding and infant feeding. Capturing information on this sub-sample has enabled LINKAGES and its partners to look at trends over time.

Table 1: Surveyed Districts and Communities

[4] See Table 1 for names of districts and communities surveyed

NGO Affiliation	Selected District	Selected Communities
CRS	East Mamprusi	Jawani, Kanmbago
	Bongo	Vea, Amekyiyabiisi, Kodorogo, Kabre, Foe, Agomo
	Lawra	Pkiyagl, Bapaar
Ghana Red Cross	Bolgatanga,	Asoe-goe, Tongo, Zuarungu, Zaare, Daborin
	Bawku East	Manga, Deega
	Bawku West	Ghanire (Gbandare), Boya, Googo
UNICEF/GHS	Builsa	Kandema
	Yendi	Nayilifong south, Nakpachei, Tonoli
	Savelugu Nanton	Tumahi, Pigu
	Tolon Kumbungu	Gbrimani, Gbulahigu, Bognayili, Kukuo
ActionAid	Tamale	Vittin, Gbambaya, Nalun
	West Gonja	Hangaline, Yapei, Tidrope, Disa, Sakpala, Gbrigu, Sheri 1, 2, 3
ACDEP	East Mamprusi,	Namangu, Kasape, Langbensi
	West Mamprusi	Wulungu, Zangu-Yakura
	Bawku East	Zuabuliga, Mognori
	Bolga	Yamerija, Datoku, Duusi
FFH	Tamale	Sagnarigu (four clusters), Kpalsi, Jisonayilli, Kanvilli (two clusters), Nashegu, Shishegu
NewEnergy	West Mamprusi	Sareba, Sayoo, Soaba, Nabari (six clusters), Bugya-Kura
World Vision International	Nadowli	Dafiama, Takpo, Nanvilli (two clusters), Wogu
	Savelugu Nanton,	Nanton
	Gushiegu Karaga	Gushiegu Central, Karaga Central, Pishigu, Kpatinga Central
World Food Program	Jirrapa Lambusie	Billaw, Ullo, Ulkpong, Sabuli, Samoa
	Nanumba	Dipa, Nabayilli, Nassamba
Bole	Bole	Bamboi, Bole, Dikatma, Gunsi, Kalba, Kulmasa, Nahari Jessi, Sanjeri, Sumpuoyiri, Tuna
Sissala	Sissala	Bullu, Duwie, Gwollu, Jiton, Kusale, Nabulo, Pulima, Tanla or Taffiasi, Tumu, Wuru
Brong Ahafo Region	Wenchi, Sunyani, Brekum	Wenchi (four clusters), Seika (two clusters), Senase, Abi, Odomase (two clusters)

3.2 Data Collection Instruments

Three structured questionnaires with pre-coded responses were administered: a form for mothers of children less than 12 months of age (Form 1), one for the fathers (Form 2), and another for older mothers/mothers-in-law (Form 3). These were pre-tested in the Tamale Municipality during the period of training, which occurred from December 13th to 16th 2003 and changes made to the instruments. The questionnaires are included in Appendix F.

Mothers of Children under 12 months of age (Form 1):

This form was administered to each mother of an eligible child. The form included five main sections as described below.

- Section One: Captured background and demographic information for the mother and infant.

- Section Two: Elicited information on timely initiation of breastfeeding, exclusive breastfeeding, and timely complementary feeding using a 24-hour and 7-day dietary recall, knowledge and consumption of vitamin A rich foods, supervised feeds, diarrhoeal prevalence in the past two weeks and knowledge about its management.

- Section Three: Captured information on recall of radio messages on infant feeding.

- Section Four: Collected information on recognition of infant feeding information and ways which women were hearing about them. It also elicited information on help received by mothers from household members for better child feeding practices, and exposure to GHS/LINKAGES educational materials.

- Section Five: Captured information on the management of common breastfeeding problems.

Fathers (Form 2) and Older Mothers/Mothers-in-law (Form 3):

- Section One: Captured background information from the grandmother or father of the infant, radio listening patterns and recall of radio messages on infant feeding.
- Section Two: Collected information on knowledge of recommended IYCF messages and ways that respondents were hearing about them. It also elicited information on support given to mothers by grandmothers or the fathers for better child feeding practices and exposure to GHS/LINKAGES educational materials.

A small number of informal interviews were held with survey respondents to elicit information as to why certain optimal behaviours were not performed. Responses from these interviews are incorporated into the Results and Discussion Section.

3.3 Training and Data Collection

A survey team made up of supervisors and interviewers most of whom had participated in previous LINKAGES RAPs and/or were partner staff was identified and hired to execute the survey. Training of the survey team took place at the Tamale Institute of Cross Cultural Studies (TICCS) in the Northern Region, Tamale from December 12th –16th, 2003. This began with a one-day training on December 12th for 13 supervisors during which the training schedule, supervisor and interviewer manuals, and survey questionnaires were reviewed. Supervisors were also assigned to sections to facilitate certain parts of the training timetable.

Interviewer training happened from December 13th–16th, 2003 for 38 interviewers and included presentations, discussions, role-plays, group work, and field practice. This involved two days of classroom sessions and another two days of field practice. The interviewers were put into language groups and assigned to supervisors based on the eight main languages spoken in the selected communities namely Guruni, Dagbani, Gonja, Mampruli, Kusal, Dagaare, Sassali and Twi. The questionnaires were verbally translated by the respective groups into local languages and then back into English to ensure that the questions maintained their validity.

Data collection covered a period of six days beginning with community preparation, which included meetings with chiefs, opinion leaders, and survey teams to inform communities of the survey and obtain permission for its conduct. Supervisors then assigned interviewers to sections depending on the size of communities following established sampling procedures.

Supervisors monitored interviews and provided the required support to interviewers. At the end of each day's fieldwork, interviewers submitted completed questionnaires and a daily report of work done. Supervisors proof-read the questionnaires both in the field and at the end of each day's work to check for consistency, accuracy, and completeness. Depending on the type of errors made, interviewers were required to revisit homes to correct them. Supervisors tracked questionnaires by keeping a daily log of questionnaires sent out to the field and those returned.

3.4 Data Processing and Analysis

Data was input into computers using Epi Info and a double entry system. Verification, range and consistency checks were performed and the data was imported into the SPSS statistical package for cleaning and analysis. Data was weighted based on population coverage for each partner as well as control districts. Frequencies, means, and cross tabulations were run to obtain impact and process figures for partner and control areas separately, as well as for specific NGO coverage areas.

3.5 Limitations of the survey

- Data was gathered from areas where NGO partners had indicated they were going to implement IYCF activities. Although various efforts were made with all NGO partners to confirm whether they were actually implementing IYCF activities in these coverage areas, some never replied. The survey therefore covered areas where partners had confirmed they were working as well as those where no word was received. Given this situation, is possible that some communities surveyed were actually not intervention communities.

- It is also worth noting that although each NGO's operations cover a number of districts, each district is unique in how it implements nutrition BCC activities hence results may differ from district to district.

- Unlike other NGO coverage areas where data has consistently been gathered from the same districts over the years, data for UNICEF districts has come from a different district each year, i.e. Yendi (2000), Builsa (2001), Savelugu Nanton (2002), and all three districts plus Tolon Kumbungu (2003). This makes it somewhat difficult to compare results across the years with respect to UNICEF districts.

- Mothers have difficulty estimating how long it took them to initiate breastfeeding after delivery hence proxies have been used over the years to estimate this time. During this survey more probing was done than ever before and if a mother said she put the newborn to the breast after she and/or the baby bathed mothers were categorised as having taken between 1-24 hours to introduce the baby to the breast. This poses a limitation on comparing results on timely initiation of breastfeeding results with previous years.

- The TCF indicator has limitations in its use and interpretation. Although it provides information on delayed introduction of complementary foods it does not provide information on when foods were first introduced to children. It also does not capture the quality of foods fed to children.

4.0 RESULTS AND DISCUSSIONS

Most of the results presented in this section represent the analysis of responses to questions asked of three different groups, namely mothers with a child 0-<12 months of age; older mothers/mothers-in-law; and fathers of children 0-<12 months. These groups are described here as mothers, grandmothers and fathers respectively in the rest of the report. All results have been stratified by partner program districts and control areas. Where data is available, trends have been observed and discussed. In April 2004, LINKAGES conducted a qualitative study to capture information on changes in community norms in IYCF behaviours. Information from the qualitative study has been cited in various sections of this report to help provide in-depth understanding of issues discussed in the current survey. A final report of the study is underway.

4.1 Demographic characteristics and background information

The sex distributions for infants in the survey were 50% males and 50% females in program districts and 54% males and 46% females in control areas. Mothers were asked about their ages. Most of them were not able to give exact ages hence interviewers probed to get approximate ages. The mean ages of mothers were 29 and 27 in the program and control areas respectively.

Fewer respondents in the north had had some form of formal education comprising adult literacy classes (non formal), primary, middle, junior or senior secondary schools or any other higher level of education. In the program areas 20% of mothers, 36% of fathers and 8% of grandmothers had been to some form of school. More respondents in the Brong Ahafo Region (75%) had been through some level of education compared to 27% in the Sissala and Bole Districts or even 20% in program districts (see Table 2).

Table 2. Highest level of education reached

	Mothers			Fathers		Grandmothers	
	Program	Control North	Control BA	Program	Control All	Program	Control All
Ever been to school	24%	28%	81%	43%	57%	9%	13%
Highest level reached							
Arabic	4%	1%	6%	7%	7%	1%	0%
Non-formal	<1%	1%	1%	1%	0%	1%	0%
Primary	10%	10%	24%	11%	10%	4%	7%
Middle school/Junior Secondary	7%	10%	43%	12%	30%	2%	7%
Secondary	2%	6%	6%	7%	10%	0%	0%
Higher	1%	1%	0%	6%	0%	0%	0%

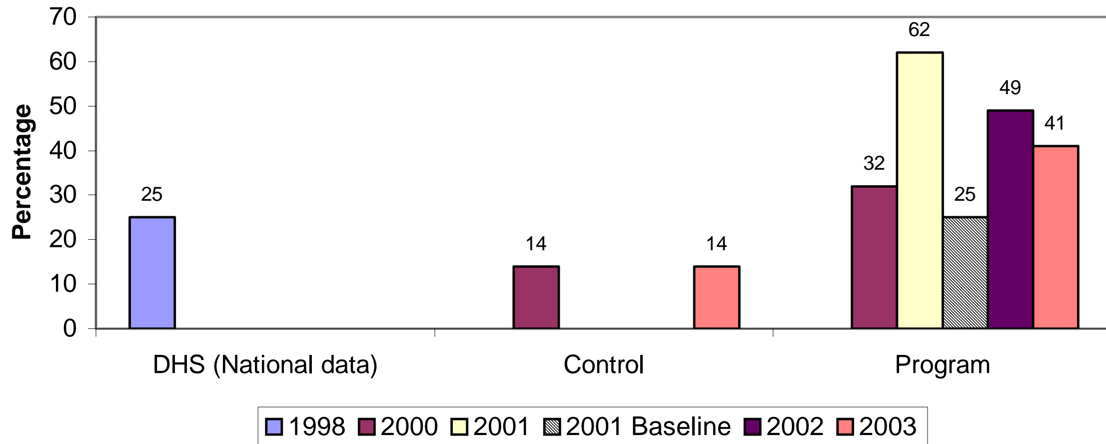
4.2 Breastfeeding

4.2.1 Timely initiation of breastfeeding (TIBF) rate

Mothers were asked how long it took them to initiate breastfeeding after the delivery of their youngest child. While some mothers could mention the exact time it took them to initiate breastfeeding, others had difficulty estimating the time period and gave more qualitative responses such as initiating breastfeeding immediately after delivery, following bathing or after resting. These responses were therefore coded appropriately. Only mothers who initiated

breastfeeding immediately after delivery, before bathing or within a period of one hour were classified as having done this in a timely manner[5]. Any other response was classified as untimely. Using this proxy, 41% of infants less than 12 months were put to the breast within the first hour after delivery among program districts. Although this shows an 8% decline from the 2002 RAP survey (Fig 1), caution needs to be taken in comparing this figure with previous years' results as explained in section 3.5.

Fig 1 TIBF Rate: The percentage of infants 0-<12 months who were put to the breast within one hour after delivery in program and control districts



NB. Two surveys were held in 2001; one for old partner areas (CRS, GRCS, and UNICEF) and a baseline for new partner areas (ACDEP, ActionAid, FFH, NewEnergy, WFP, WVI)

In control areas, the rate remained the same compared to rates measured in the 2000 RAP where only 14% of infants were put to the breast within the first hour after delivery. Currently almost 90% of infants are put to the breast within the first day of delivery in program areas showing a great departure from 1998 where the DHS puts the figure at 54%. Similar to the DHS in 1998, the situation is no different in control areas where 56% of mothers put the newborn to the breast within a day of delivery.

During informal discussions held with mothers, the following reasons were given for delaying initiation of breastfeeding:

- There was no breastmilk flowing at the time of delivery so they had to wait till milk came into the breast before initiating breastfeeding
- The newborn did not cry indicating that it wasn't hungry
- Mother and/or newborn had to bathe first to remove dirt. This was also cited as a major barrier to early initiation of breastfeeding in the formative research in the year 2000[6].
- Both mother and newborn were tired after the birthing process and had to rest for a while before breastfeeding.

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[5] Lung'aho M. S. et al. 1996. Tool Kit for Monitoring and Evaluating Breastfeeding Practices and Programs. Wellstart International

[6] Armar-Klemesu, M. 2000. Current Feeding Practices in Northern Ghana: Understanding the issues through Formative Research.

Although these might seem to be cultural barriers, they are surmountable when partners and their existing networks put their hands to the wheel. The GRCS had indicated that although their child survival program ended in mid 2002 and trainings ended prior to that, they focused their attention in the year 2003 on targeting messages on IYCF specifically to pregnant and breastfeeding women in the areas where they work. As a result of this, 75 Mother-to-Mother Support Groups (MtMSGs) were formed in the Upper East Region in 2003 addressing only IYCF matters. Hitherto the child survival program had targeted Mothers' Clubs comprising women in all age groups and messages had covered a wide range of issues including diarrhoea, malaria, hygiene, infant feeding, etc. With this calculated shift in focus, and despite an important reduction in funding important progress was made toward improving IYCF behaviours in GRCS zones.

Focus group discussions held in selected partners coverage areas in the north in April 2004 revealed that both mothers and health care providers associated early initiation of breastfeeding to the delivery of the placenta and early milk flow and when they knew this, they were willing to practice early initiation, even before bathing had occurred. In Bole, which served as control on the other hand, community members could not imagine how the newborn could be put to the breast immediately especially before bathing[7]. There is every indication that more efforts will be needed by the GHS in Bole and its partners to promote better early initiation. TIBF rates by specific partner districts have been presented in Table 3.

Table 3: The percentage of children who were put to the breast within the first hour after delivery in program and control districts

Program districts	2000	2001	2001 Baseline	2002	2003
CRS	50%	89%	-	76%	74%
GRCS	30%	36%	-	44%	64%
ACDEP	-	-	38%	35%	39%
ActionAid	-	-	14%	42%	28%
FFH	-	-	30%	51%	21%
NewEnergy	-	-	19%	67%	50%
WFP	-	-	35%	38%	38%
WVI	-	-	19%	31%	29%
UNICEF	12%	82%	-	49%	37%
All Program	32%	62%	25%	49%	41%
Control					
North	-	-	-	-	15%
Brong Ahafo	-	-	-	-	13%
All Control	14%	-	-	-	14%

NB. Two surveys were held in 2001; one for old partner areas (CRS, GRCS, and UNICEF) and a baseline for new partner areas (ACDEP, ActionAid, FFH, NewEnergy, WFP, WVI)
- Indicates that no data was collected for the period or sample size was so small that estimating frequencies will be imprecise.

4.2.2 Prelacteal feeds

Similar to the 2002 survey, 13% of infants in program districts received plain water, water with additives, other liquids or foods before breastfeeding was initiated as shown in Table 4. Prelacteal feeding rates in control areas were almost the same as those observed in program areas although control districts in the north recorded a higher rate (20%) than in Brong Ahafo (4%). Prelacteal feeds are given as part of rituals and ceremonies to "welcome the infant into the world" and/or because the initiation of breastfeeding has been delayed. Although 59% of infants in program districts and 86% in control areas were put to the breast late after delivery,

[7] Schubert J., Adjei E., 2004. Changes in Child Feeding Practices in Northern Ghana: Understanding the issues through Qualitative Research. GHS/LINKAGES and Partners in Ghana.

only about one fifth (19% in program and 16% in control) received prelacteal feeds, which is commendable. Of the remaining infants among whom breastfeeding was started late, 1% in program districts received milk from a wet nurse while the rest did not receive anything.

Table 4: The percentage of infants 0-<12 months of age who received liquids or semi-solids before initiation of breastfeeding in partner and control districts.

Program districts	**2001**	**2001 Baseline**	**2002**	**2003**
CRS	0%	-	5%	0%
GRCS	14%	-	18%	4%
ACDEP	-	18%	19%	9%
ActionAid	-	24%	9%	28%
FFH	-	16%	4%	20%
NewEnergy	-	45%	2%	10%
WFP	-	12%	2%	10%
WVI	-	27%	20%	15%
UNICEF	4%	-	6%	16%
All Program	8%	22%	13%	13%
Control				
North	-	-	-	20%
Brong Ahafo	-	-	-	4%
All Control	-	-	-	15%

NB. Two surveys were held in 2001; one for old partner areas (CRS, GRCS, and UNICEF) and a baseline for new partner areas (ACDEP, ActionAid, FFH, NewEnergy, WFP, WVI)

- Indicates that no data was collected for the period or sample size was so small that estimating frequencies will be imprecise.

4.2.3 Exclusive breastfeeding rate (EBR)

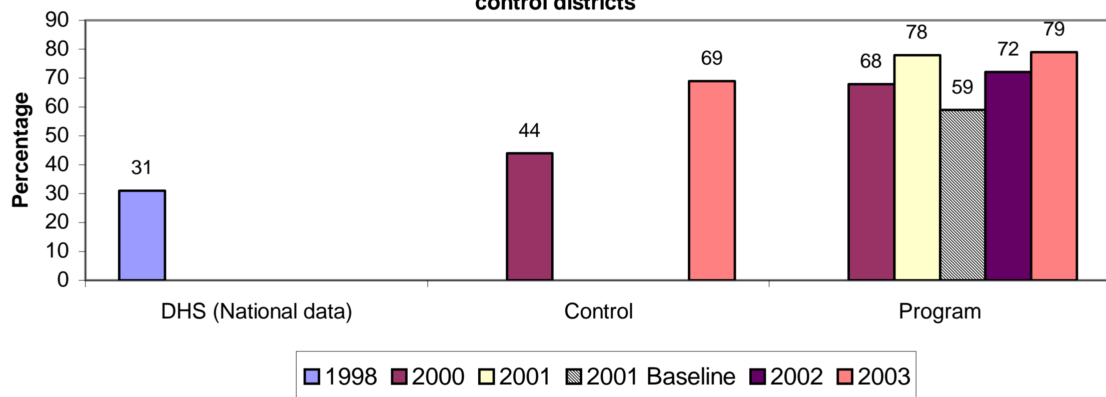
An infant 0-<6 months of age is considered to be exclusively breastfed if he or she receives only breastmilk, with no other liquids or solids, with the exception of drops or syrups containing vitamins, mineral supplements, or medicines. Going by this definition, 79% of infants in program districts and 69% in control areas were exclusively breastfed in the past 24 hours. These results show significant increases in EBR in both program and control areas compared with rates observed in the 1998 DHS and the year 2000 when the program began (Tables 4, 5 and Fig 2). A close look at Figs 3, 4, 5, and 6, indicates remarkable improvement in breastfeeding patterns in program districts between 2000 and 2003. At the beginning of the program in 2000, only about one half of children under four months were exclusively breastfed while the other half received breastmilk and other forms of liquids. In the current survey, over 70% of children within this age group were exclusively breastfed. All efforts made by partners in improving EBR need to be commended. The WVI for instance went beyond using MtMSGs networks to forming Father-to-Father Support Groups (FtFSGs) in ten communities in the Nadowli District to advance the course of IYCF.

Sissala District in the Upper East Region recorded a high EBR of 80%. Quite apart from the fact that Sissala District is reached by LINKAGES sponsored radio programs broadcast through Radio Upper West, Plan International an NGO working closely with the GHS have also been promoting IYCF through a child survival program in the district which may account for the high EBR observed. It is intriguing to know that although there was no NGO promoting IYCF in Bole District prior to the survey neither was the district reached by radio, EBR was quite high (66%). The results observed in Bole might be due to the important efforts of the GHS. LINKAGES funded and organised a Baby Friendly Hospital Initiative (BFHI) training for 68 staff of the district hospital in Bole in March 2004 and it is hoped that this capacity building effort will equip the GHS to improve on what it has already started.

Generally the following were comments made by respondents for not practising exclusive breastfeeding. These could form part of the issues to be addressed by partners in their interaction with communities.

- The reasons why water should not be given to children under six months is not explained well enough to mothers
- The weather was dry and child was crying. The mother felt the child was thirsty and needed water
- Mother gave the child water because she wanted her child to know the taste of it should the child pass away
- Other foods were introduced when the mother thought her breastmilk was not enough.

Fig 2 EBR: The percentage of infants 0-<6 months of age who received only breastmilk with vitamins, mineral supplements or medicines in the past 24 hours in program and control districts



NB. Two surveys were held in 2001; one for old partner areas (CRS, GRCS, and UNICEF) and a baseline for new partner areas (ACDEP, ActionAid, FFH, NewEnergy, WFP, WVI)

Table 5: The percentage of infants 0-<6 months of age who received only breastmilk with vitamins, mineral supplements or medicines in the past 24 hours in program and control districts

Program districts	2000	2001	2001 Baseline	2002	2003
CRS	88%	94%	-	97%	90%
GRCS	49%	64%	-	63%	92%
ACDEP	-	-	67%	66%	62%
ActionAid	-	-	53%	60%	64%
FFH	-	-	65%	81%	75%
NewEnergy	-	-	27%	88%	80%
WFP	-	-	72%	83%	92%
WVI	-	-	54%	68%	89%
UNICEF	73%	89%	-	85%	78%
All Program	**68%**	**78%**	**59%**	**72%**	**79%**
Control					
North	-	-	-	-	73%
Brong Ahafo	-	-	-	-	59%
All Control	**44%**	**-**	**-**	**-**	**69%**

NB. Two surveys were held in 2001; one for old partner areas (CRS, GRCS, and UNICEF) and a baseline for new partner areas (ACDEP, ActionAid, FFH, NewEnergy, WFP, WVI)
- Indicates that no data was collected for the period or sample size was so small that estimating frequencies will be imprecise.

Table 6: The percentage of infants 0-<6 months of age who received only breastmilk with vitamins, mineral supplements or medicines in the past 7-days in program and control districts				
Program districts	2001	2001 Baseline	2002	2003
CRS	94%	-	96%	90%
GRCS	59%	-	55%	92%
ACDEP	-	66%	63%	59%
ActionAid	-	49%	60%	64%
FFH	-	63%	81%	71%
NewEnergy	-	19%	86%	80%
WFP	-	71%	83%	92%
WVI	-	51%	67%	87%
UNICEF	89%	-	82%	77%
All Program	**78%**	**59%**	**72%**	**77%**
Control				
North	-	-	-	69%
Brong Ahafo	-	-	-	59%
All Control	**-**	**-**	**-**	**68%**

NB. Two surveys were held in 2001; one for old partner areas (CRS, GRCS, and UNICEF) and a baseline for new partner areas (ACDEP, ActionAid, FFH, NewEnergy, WFP, WVI)

- Indicates that no data was collected for the period or sample size was so small that estimating frequencies will be imprecise.

Fig 3: Liquids and foods received by children aged 0-<12 months in the past 24 hours in program districts 2000

Fig 4: Liquids and foods received by children aged 0-<12 months in the past 24 hours in program districts 2003.

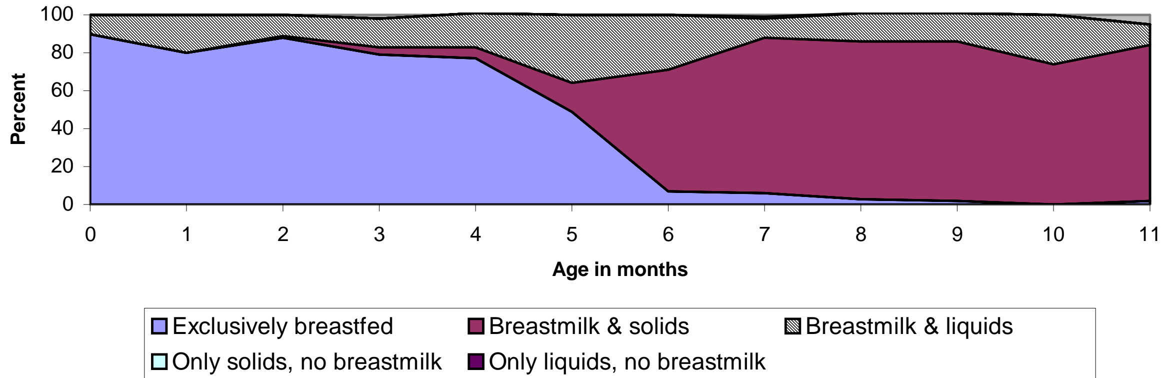


Fig 5: Liquids and foods received by children aged 0-< 12 months in the past 24 hours in control districts 2000

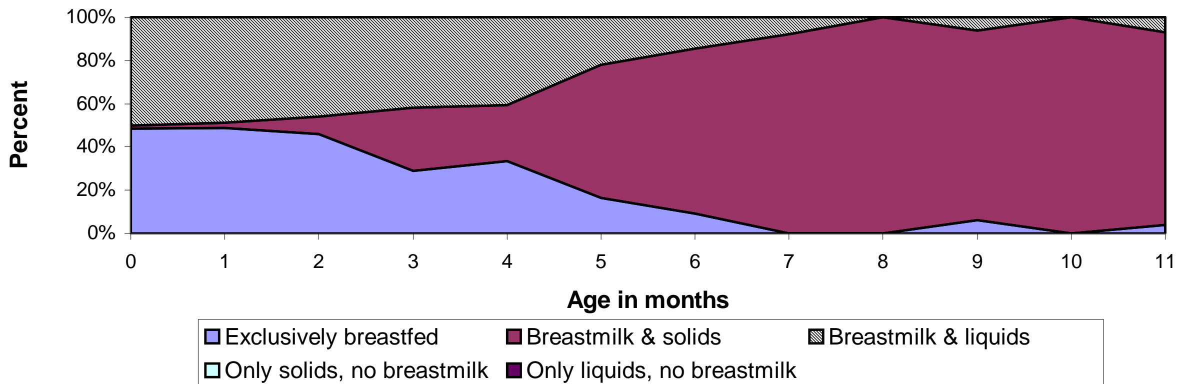
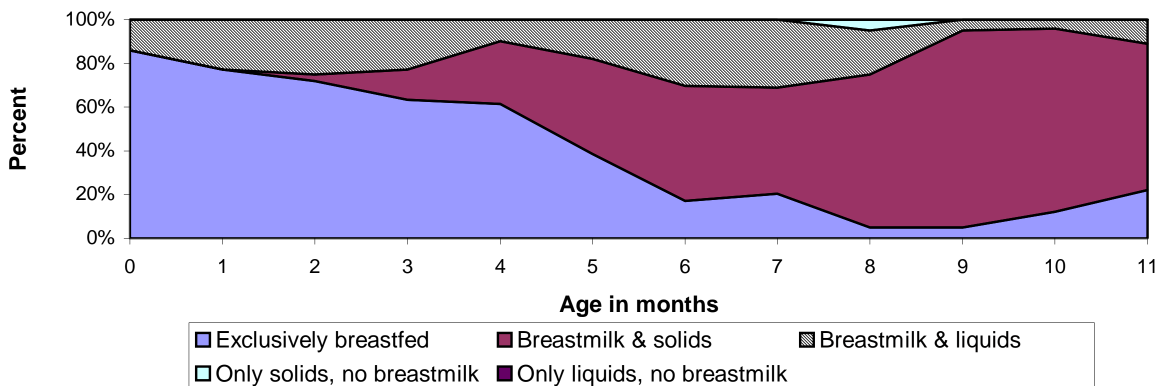


Fig 6: Liquids and foods received by children aged 0-< 12 months in the past 24 hours in control districts 2003



4.2.4 Bottle feeding

The proportion of mothers who reported bottle-feeding in the past 7 days have remained at levels below 10% in the past two years in program communities. Among control districts, the Brong Ahafo registered the highest use (19%) of feeding bottles. Mothers gave reasons for bottle-feeding such as it being convenient, a status symbol, and not wanting to enlarge the mouth of their babies. The practice of bottle-feeding is actively discouraged since it greatly increases the child's risk of illness and death from diarrhoeal disease and infection due to the difficulty in properly cleaning and sterilising both bottles and nipples. Artificial nipples do not conform to a baby's mouth the same way as a mother's nipple. Babies can rapidly become accustomed to a way of sucking from artificial nipples which, when applied to the mother, can cause pain and be less effective in removing the breastmilk. Bottle-feeding is also associated with shortening of the period of postpartum amenorrhoea[8].

Table 7: Bottle use among children 0-<12 months in program and control districts

Program districts	In the past 24 hours (2000)	In the past 7 days (2001)	In the past 7 days (2001 -Baseline)	In the past 7 days (2002)	In the past 7 days (2003)
CRS	1%	1%	-	4%	3%
GRCS	3%	4%	-	7%	5%
ACDEP	-	-	6%	10%	3%
ActionAid	-	-	11%	7%	5%
FFH	-	-	11%	4%	12%
NewEnergy	-	-	16%	11%	10%
WFP	-	-	10%	5%	10%
WVI	-	-	13%	6%	8%
UNICEF	6%	2%	-	11%	15%
All Program	3%	3%	11%	7%	8%
Control					
North	6%	-	-	-	9%
Brong Ahafo	-	-	-	-	19%
All Control	-	-	-	-	12%

NB. Two surveys were held in 2001; one for old partner areas (CRS, GRCS, and UNICEF) and a baseline for new partner areas (ACDEP, ActionAid, FFH, NewEnergy, WFP, WVI)
- Indicates that no data was collected for the period or sample size was so small that estimating frequencies will be imprecise.

4.3 Complementary feeding

4.3.1 Timely complementary feeding (TCF) rate

The TCF rate is defined as the percentage of infants 6-<10 months of age who were breastfed and received semi-solid and/or solid foods in the previous 24 hours. This rate was also calculated using a 7-day dietary recall (Tables 8, 9 and Fig 7). There has been an increase in TCF rates in program districts with an 8% increase observed between the years 2002 and 2003 and a 5% increase between 2000 and 2003. In control districts, a 10% decline in TCF was observed between 2000 and 2003. During informal discussions mothers cited food refusal as the main reason for not offering semi-solid or solid foods to children. The FGDs held in April 2004 revealed that although mothers who are illiterate are unable to estimate when children turn six months on their own, health workers and other family members prompt them so they can start introducing semi-solid or solid foods at six months.

[8] Ghana Statistical Service (GSS) and Macro International Inc. (MI). 1999. Ghana Demographic Health Survey 1998. Calverton, Maryland: GSS and MI.

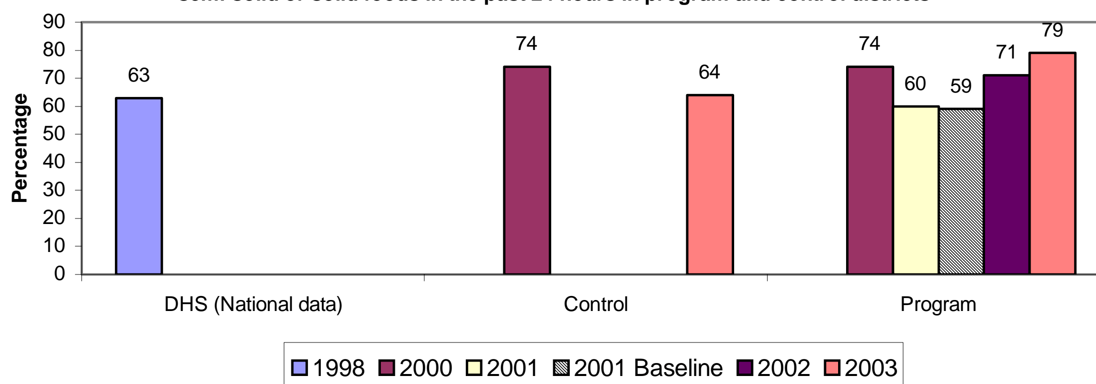
Table 8: The percentage of infants 6-<10 months of age who received breastmilk and semi-solid or solid foods in the past 24 hours in program and control districts.					
Program districts	2000	2001	2001 Baseline	2002	2003
CRS	83%	86%	-	84%	83%
GRCS	69%	42%	-	66%	90%
ACDEP	-	-	71%	76%	89%
ActionAid	-	-	71%	76%	67%
FFH	-	-	50%	69%	46%
NewEnergy	-	-	66%	56%	75%
WFP	-	-	77%	80%	100%
WVI	-	-	66%	76%	78%
UNICEF	69%	57%	-	52%	74%
All Program	**74%**	**60%**	**66%**	**71%**	**79%**
Control					
North	-	-	-	-	60%
Brong Ahafo	-	-	-	-	76%
All Control	**74%**	**-**	**-**	**-**	**64%**

Table 9: The percentage of infants 6-<10 months of age who received breastmilk and semi-solid or solid foods in the past 7 days in program and control districts				
Program districts	2001	2001 Baseline	2002	2003
CRS	86%	-	84%	83%
GRCS	50%	-	66%	90%
ACDEP	-	66%	76%	89%
ActionAid	-	49%	76%	67%
FFH	-	63%	69%	46%
NewEnergy	-	19%	56%	75%
WFP	-	71%	80%	100%
WVI	-	66%	76%	78%
UNICEF	82%	-	55%	74%
All Program	**68%**	**57%**	**82%**	**84%**
Control				
North	-	-	-	65%
Brong Ahafo	-	-	-	84%
All Control	**-**	**-**	**-**	**70%**

NB. Two surveys were held in 2001; one for old partner areas (CRS, GRCS, and UNICEF) and a baseline for new partner areas (ACDEP, ActionAid, FFH, NewEnergy, WFP, WVI)

- Indicates that no data was collected for the period or sample size was so small that estimating frequencies will be imprecise.

Fig 7 TCF Rate: The percentage of infants 6-<10 months of age who received breastmilk and semi-solid or solid foods in the past 24 hours in program and control districts



During the 2000 RAP, 38% of children in program and 75% in control districts had received semi-solids foods regularly (at least twice a week) before 6 months of age in program and control districts. From the current survey results, the figures for program and control districts have reduced to 21% and 43% respectively (Table 10). To address certain limitations of TCF rate in determining when complementary foods were offered for the first time, additional data was gathered to fill this information gap. Of all children 6-<12 months, about half (49% in program and 54% in control districts), were offered semi-solid foods at six months for the first time. In the year 2000 the figures were 44% in program districts and 25% in control districts (Table 11). In almost all instances, the first semi-solid food offered was porridge or koko.

Table 10: The age at regular receipt of semi-solids food among infants 0-<12 months of age in program and control districts

Age	Program		Control	
	2000	2003	2000	2003
0	1%	0%	1%	2%
1	1%	1%	4%	2%
2	3%	4%	11%	3%
3	13%	4%	25%	13%
4	11%	7%	18%	15%
5	10%	6%	17%	9%
6	40%	46%	18%	46%
7	20%	26%	6%	13%
8	1%	4%	2%	2%
9	2%	2%	0%	0%
10	0%	0%	0%	0%
11	0%	0%	0%	0%
Total	100%	100%	100%	100%

Table 11: The age at regular receipt of semi-solids food among infants 6-<12 months of age in program and control districts

Age	Program		Control	
	2000	2003	2000	2003
0	1%	0%	1%	1%
1	1%	0%	4%	0%
2	3%	3%	3%	2%
3	10%	4%	22%	11%
4	8%	6%	19%	11%
5	9%	5%	16%	5%
6	44%	49%	25%	54%
7	21%	26%	8%	16%
8	1%	4%	2%	2%
9	2%	2%	0%	0%
10	0%	0%	0%	0%
11	0%	0%	0%	0%
Total	100%	100%	100%	100%

4.3.2 Enriching koko

Koko, (a fermented maize-based porridge) is one of the major semi-solid foods first introduced to children. More often than not it is watery and fed to children with only sugar added. As a weaning food, koko is low in protein and high in energy density meeting 49% and 90% respectively, of recommended daily intakes of protein and energy[9]. Hence it is recommended that it be enriched with nutrient dense items such as fish or fish powder, beans or bean flour, groundnut or groundnut paste, milk, egg or yolk, and red palm oil or shea butter to make it both nutrient and energy dense. Forty-eight percent (48%) of mothers in both program and control districts fed children aged 6-<12 months koko enriched with nutrient dense items in the 24 hours preceding the interview. These results show an 11% decline in the proportion of mothers who enriched porridge with recommended items from a figure of 59% observed in 2002 (Table 12). The proportion of mothers who added only sugar to children's porridge for sweetening however remained almost the same – 22% in 2003 and 24% in 2002. It is pretty difficult to give reasons for the decline in porridge enrichment figures. Possibly, some mothers confused porridge prepared from weanimix (a cereal-legume mixture, promoted as an appropriate weaning food by health workers), which could be offered without necessarily adding any other thing to that prepared from the standard corn dough variety. However mothers who did not enrich porridge for children gave the following reasons:

- Lack of money to buy recommended items to enrich koko
- The baby had diarrhoea when porridge was enriched hence mother stopped enriching porridge
- The child liked koko when only sugar was added so it was easier to feed the child

Table 12: The percentage of children 6-<12 months of age given koko enriched with various items in program and control districts

	Koko with only sugar			**Koko porridge with nutrient rich items**		
Program districts	**2001**	**2002**	**2003**	**2001**	**2002**	**2003**
CRS	3%	23%	9%	93%	68%	82%
GRCS	13%	28%	8%	61%	62%	79%
ACDEP	-	5%	30%	-	68%	42%
ActionAid	-	29%	24%	-	43%	18%
FFH	-	5%	22%	-	53%	44%
NewEnergy	-	33%	25%	-	43%	50%
WFP	-	60%	57%	-	25%	14%
WVI	-	35%	25%	-	20%	32%
UNICEF	3%	27%	20%	85%	50%	50%
All Program	**6%**	**24%**	**22%**	**81%**	**59%**	**48%**
Control						
North	-	-	42%	-	-	32%
Brong Ahafo	-	-	15%	-	-	82%
All Control	**-**	**-**	**33%**	**-**	**-**	**48%**

- Indicates that no data was collected for the period or sample size was so small that estimating frequencies will be imprecise.

[9] Kwaku, E.A., Omwega A.M., Muroki N.M., 1998. Evaluation of Weaning Diets in Periurban Kumasi, Ghana. East African Medical Journal.

4.3.3 Vitamin A rich foods

Although the LINKAGES BCC program does not actively promote the consumption of vitamin A rich foods, RAP surveys over the last two years i.e. 2002 and 2003, have captured data to inform the GHS and its partners to help them improve dietary consumption of vitamin A rich foods. Mothers were asked about their knowledge of vitamin A rich foods and how frequently children have been fed these foods in the past week. The current survey shows that only about a third (33%) of mothers with children 6-<12 months could mention at least one source of vitamin A rich food compared to almost half of mothers surveyed (47%) in 2002. Although the consumption of vitamin A rich foods was higher in program than control districts, figures recorded in the current survey are much lower than those observed in 2002 as shown in Table 9.

Table 13: Knowledge and consumption of vitamin A rich foods in program and control districts

	Knowledge of at least one vitamin A rich food (Mothers of children 6-<12 months)		Consumption of vitamin A rich food at least one day in the past 7 days (Children 6-<12 months)		Consumption of vitamin A rich food at least three days in the past 7 days (Children 6-<12 months)	
	2002	**2003**	**2002**	**2003**	**2002**	**2003**
All Program	47%	33%	64%	47%	50%	39%
Control						
North	-	26%	-	26%	-	18%
Brong Ahafo	-	47%	-	68%	-	56%
All Control	-	32%	-		-	28%
Both program and control	-	33%		45%		36%

- Indicates that no data was collected for the period or sample size was so small that estimating frequencies will be imprecise.

4.3.4 Frequency of feeding and supervision

Mothers were asked how often children had eaten semi-solid or solid foods in the past 24 hours in addition to breastmilk. Of all children 6-8 months who had received food in the past 24 hours, 53% in program districts and 36% in control districts were offered food at least 3 times. For children 9-11 months, 21% had received food at least 4 times in program districts while in control districts, the figure was 16%. Among children aged 9-11 months, about 70% of mothers offered food between 1-3 times. This information is presented in Table 14. It is possible that in both program and control districts, mothers underreported the consumption of snacks since most might not consider them as meals. Ideally, children within the following ages should be offered food at least the following numbers of times, including snacks, in a day in addition to breastmilk: 6-8 months (3 times); 9-11 months (4 times); 12 months and over (5 times).

Table 14: Receipt of foods (semi-solid/solids) at the recommended frequency in the past 24 hours by children in target age groups in program and control districts

	6-8 months	**9-11 months**
All Program	53%	21%
Control		
North	29%	10%
Brong Ahafo	60%	25%
All Control	36%	16%

To ensure that children are getting enough food, it is recommended that they be served food in a separate bowl. Infants need to be fed directly and older children assisted to eat[10]. Among children aged 6-<12 months who had started eating, over 90% in both program and control communities were often fed by an adult caregiver, mostly the mother and this is encouraging. In less than 10% of children it was a younger caregiver who fed a child (See Table 15 for details). Fewer children in this survey were served food other than porridge in a separate bowl in program communities (39%) compared to results of RAP 2002 (44%) as presented in Table 16. Often, the caregivers report feeding children from a bowl as they eat with them, which may pose difficulties with estimating whether the child has had enough.

Table 15: Who feeds child regularly?

	Mother	**Other Adult Caregiver**	**Younger Caregiver**
All Program	80%	13%	7%
Control			
North	84%	6%	10%
Brong Ahafo	89%	7%	4%
All Control	85%	6%	8%

Table16: The percentage of children 6-<12 months who were served food (apart from porridge) in a separate bowl in program and control districts

Program districts	**2000**	**2001**	**2002**	**2003**
CRS	36%	42%	73%	38%
GRCS	22%	16%	23%	29%
ACDEP	-	-	58%	45%
ActionAid	-	-	36%	25%
FFH	-	-	65%	63%
NewEnergy	-	-	64%	67%
WFP	-	-	83%	43%
WVI	-	-	46%	27%
UNICEF	-	-	93%	61%
All Program	32%	32%	44%	39%
Control				
North	24%	-	-	22%
Brong Ahafo	-	-	-	68%
All Control	24%	-	-	35%

- Indicates that no data was collected for the period or sample size was so small that estimating frequencies will be imprecise.

4.5 Exposure to radio messages

Since the year 2000, LINKAGES has been sponsoring a wide range of radio broadcasts on optimal child feeding behaviours including panel discussions, call-in shows, quiz programs and dramatic comedies through Radio Savannah in the Northern Region, Upper Region Agricultural (URA) Radio in the Upper East Region, Radio Upper West and Radio Progress in the Upper West Region. These programs are intensified each year during World Breastfeeding Week, which takes place during the first week of August.

The survey indicates that radio listening remains somewhat high in both program and control districts. In partner program districts, 67% of mothers, 58% of grandmothers and 89% of fathers reported listening to the radio. These results did not change significantly from results of the RAP 2002. For control areas, 54% of mothers, 58% of grandmothers and 83% of fathers listen to the

[10] Guiding Principles for Complementary Feeding of the Breastfed Child. Pan American Health Organisation. World Health Organisation

radio. Of all respondents interviewed, 44% of mothers, 71% of fathers, and 41% of grandmothers in program districts could recall at least one key message on IYCF broadcast on the radio. Fewer respondents in control areas (28% of mothers, 53% of fathers and 33% of grandmothers) could recall at least one key message (See Table 17 for details on radio exposure).

Table17: Exposure to radio in program and control districts

		Mothers		Grandmothers		Fathers	
		2002	**2003**	**2002**	**2003**	**2002**	**2003**
The percentage of respondents who listen to the radio	**All Program**	69%	67%	59%	58%	88%	89%
	North	-	43%	-	-	-	-
	Brong Ahafo	-	83%	-	-	-	-
	All Control	-	54%	-	53%	-	83%
The percentage of respondents who heard messages on breastfeeding or child feeding	**All Program**	61%	57%	53%	53%	79%	81%
	North	-	34%			-	
	Brong Ahafo	-	56%			-	-
	All Control	-	40%	-	40%		63%
The percentage of respondents who could recall at least one message	**All Program**	50%	44%	47%	41%	70%	71%
	North	-	23%	-	-	-	-
	Brong Ahafo	-	45%	-	-	-	-
	All Control	-	28%	-	33%	-	53%

NB - Indicates that no data was collected for the period or sample size was so small that estimating frequencies will be imprecise.

Of all 17 program districts surveyed, 11 have complete coverage from at least one of the radio stations in the north where LINKAGES sponsors the broadcast of messages on IYCF in the native languages of residents of these districts. Two program districts (East and West Mamprusi) reached by URA Radio, receive transmission but not in their native language while four districts (Yendi, Nanumba, West Gonja and Gushegu Karaga) receive partial coverage in their native language. For the control districts surveyed in the north, Sissala as mentioned earlier receives radio broadcasts from Radio Progress and Upper West Radio where LINKAGES sponsors the broadcast of IYCF programs. Bole does not have any radio coverage while in the south, all three control districts surveyed are reached by radio although LINKAGES has not sponsored any programs that would reach these areas (See Tables 18 and 19 for specific messages heard).

Table 18: Messages recalled from the radio in program districts

Messages	Mothers		Grandmothers		Fathers	
	2002	2003	2002	2003	2002	2003
Give only breastmilk for the first 6 months	34%	28%	32%	30%	49%	54%
Give colostrum to newborn	26%	18%	26%	20%	39%	24%
Put baby to breast immediately after delivery	27%	17%	26%	11%	34%	22%
Proper positioning and attachment to the breast	15%	17%	16%	8%	16%	14%
Start foods in addition to breastmilk at 6 months	17%	11%	20%	12%	25%	17%
Types of foods to feed young children in addition to breastmilk	14%	10%	14%	7%	23%	16%
How to feed young children e.g. frequency, amount, density	11%	6%	14%	6%	15%	16%
Empty one breast at a feed	8%	4%	7%	3%	4%	1%
Continue breastfeeding until 2 years	6%	4%	9%	3%	11%	3%
Older mothers/mother's –in-law and husbands to help make childe feeding easier	-	1%	-	2%	-	2%
Support mothers groups/clubs to help mothers better feed children	2%	1%	3%	1%	2%	1%

NB - Indicates that no data was collected for the period or sample size was so small that estimating frequencies will be imprecise.

Table 19: Messages recalled from the radio in control districts

Messages	Mothers	Grandmothers	Fathers
	2003	2003	2003
Give only breastmilk for the first 6 months	14%	23%	40%
Types of foods to feed young children in addition to breastmilk	8%	10%	27%
How to feed young children e.g. frequency, amount, density	8%	13%	10%
Start foods in addition to breastmilk at 6 months	5%	3%	13%
Put baby to breast immediately after delivery	3%	3%	3%
Give colostrum to newborn	3%	3%	0%
Proper positioning and attachment to the breast	3%	0%	7%
Empty one breast at a feed	2%	3%	3%
Continue breastfeeding until 2 years	1%	3%	0%
Older mothers/mother's –in-law and husbands to help make childe feeding easier	<1%	0%	0%
Support mothers groups/clubs to help mothers better feed children	0%	0%	0%

4.6 Knowledge of key messages on child feeding

Respondents were asked about their knowledge of key infant feeding practices such as initiation of breastfeeding, what should be done with colostrum, exclusive breastfeeding, and when to introduce complementary foods to a child. Generally there is a higher level of awareness of key messages among respondents in program than in control districts. Among program districts, the level of awareness declined slightly between 2002 and 2003. Consistently the levels of knowledge on giving colostrum, exclusive breastfeeding for the first six months of life, and beginning complementary feeding at six months were higher than initiating breastfeeding soon after delivery as shown in Tables 20 and 21. Forty-six percent (46%) of mothers in program districts and 44% in control areas felt that children should be put to the breast after both mother and child have bathed and/or rested from the birthing process. A quarter of mothers (26%) in control areas stated that babies should be put to the breast a day or more after delivery. Only 4% of mothers in program areas were of this view.

Similar to a pattern observed in the previous year, there is a significant association between knowledge of timely initiation of breastfeeding, exclusive breastfeeding for the first six months of life and practice ($P<0.001$). However, there seems to be no such association between knowledge of timely complementary feeding and its practice ($P>0.05$). Relatively fewer mothers reported knowing that complementary feeding should start at six months compared with those who actually offered these foods to their children between six and nine months of age. A possible reason for this gap is that some mothers are actually introducing complementary foods well before their children reach six months while the indicator only reflects what a mother with a child six to nine months is currently doing.

Table 20: The percentage of mothers who recognised key messages on breastfeeding or complementary feeding in program and control districts.												
	Put the newborn to the breast immediately or within the first hour after delivery			Give colostrum to baby			Exclusively breastfeed until 6 months			Start complementary feeding at 6 months		
Program districts	**2001**	**2002**	**2003**	**2001**	**2002**	**2003**	**2001**	**2002**	**2003**	**2001**	**2002**	**2003**
CRS	88%	81%	82%	100%	99%	92%	92%	92%	96%	74%	69%	79%
GRCS	54%	36%	70%	73%	85%	87%	79%	77%	78%	67%	63%	70%
ACDEP	39%	25%	37%	64%	71%	80%	76%	86%	75%	61%	65%	58%
ActionAid	37%	36%	41%	67%	88%	82%	50%	65%	62%	39%	62%	29%
FFH	52%	52%	17%	88%	96%	93%	51%	79%	79%	31%	68%	52%
NewEnergy	11%	76%	50%	52%	91%	90%	50%	94%	70%	25%	69%	60%
WFP	24%	48%	40%	71%	97%	85%	58%	95%	84%	56%	95%	85%
WVI	37%	32%	36%	72%	76%	88%	57%	58%	74%	53%	53%	71%
UNICEF	83%	61%	45%	91%	85%	83%	95%	82%	75%	64%	75%	64%
All Program	-	46%	44%	-	87%	85%	-	80%	76%	-	66%	63%
Control												
North	-	-	15%	-	-	65%	-	-	55%	-	-	37%
Brong Ahafo	-	-	9%	-	-	86	-	-	79%	-	-	68%
All Control	-	-	14%	-	-	70%	-	-	61%	-	-	45%

NB - Indicates that no data was collected for the period or sample size was so small that estimating frequencies will be imprecise.

Table 21: The percentage of grandmothers and fathers who recognised key messages on breastfeeding or complementary feeding in program and control districts.								
	Put the newborn to the breast immediately or within the first hour after delivery		Give colostrum to baby		Exclusively breastfeed until 6 months		Start complementary feeding at 6 months	
Grandmothers	**2002**	**2003**	**2002**	**2003**	**2002**	**2003**	**2002**	**2003**
Program	41%	25%	80%	80%	71%	63%	62%	51%
Control	-	3%	-	60%	-	33%	-	23%
Fathers								
Program	46%	31%	76%	62%	71%	70%	63%	57%
Control	-	13%	-	27%	-	53%	-	41%

NB - Indicates that no data was collected for the period or sample size was so small that estimating frequencies will be imprecise.

4.7 Source of information

All respondents were asked about their source of information on breastfeeding and child feeding. The major sources of information cited from program districts were health workers, radio, MtMSGs, community volunteers and older women. For control communities the major sources of information were health workers and the radio. Almost a fifth of mothers (15%) and a third (30%) of grandmothers from control districts and less than 10% of mothers from program districts depended on what they knew themselves on children feeding and did not have any source of information. It is worth noting that these results are based on spontaneous responses given and were not prompted. These figures are presented in Table 22.

Table 22: The percentage of respondents reporting an information source about breastfeeding or child feeding in program and control districts

Information source	Mothers			Grandmothers			Fathers		
	Program		**Control**	**Program**		**Control**	**Program**		**Control**
	2002	2003	2003	2002	2003	2003	2002	2003	2003
Health worker	74%	70%	51%	46%	37%	17%	47%	29%	33%
Radio	46%	41%	23%	36%	34%	23%	65%	61%	63%
Mother-to-mother support group	19%	16%	2%	13%	13%	3%	8%	9%	0%
Mother/mother-in-law	16%	12%	12%	-	-	-	15%	7%	3%
Community volunteer	19%	10%	4%	23%	12%	3%	25%	17%	3%
Husband	16%	8%	0%	6%	3%	3%	-	-	-
Other family member	13%	8%	2%	15%	7%	10%	13%	10%	3%
Neighbour /friend	17%	8%	2%	16%	10%	3%	18%	8%	3%
TBA	11%	8%	0%	14	7%	0%	8%	2%	0%
Self/own experience	5%	7%	15%		13%	30%		7%	3%
Father	1%	5%	<1%	-	-	-	4%	2%	0%
Durbar/meeting	10%	5%	<1%	16%	8%	3%	15%	8%	0%
Wife/Rival	12%	4%	0%	-	-	-	16%	3%	0%
Other source	7%	3%	2%	3%	1%	10%	4%	11%	3%
Tradition/custom	<1%	2%	<1%	2%	2%	3%	3%	2%	3%
Church/pastor/Mosque/ Imam	2%	2%	1%	2%	1%	3%	3%	3%	3%
Traditional healer	1%	1%	1%	0%	0%	3%	0%	1%	0%
Daughter/daughter-in-law	-	-	-	16%	10%	3%	-	-	-
Son	-	-	-	3	2%	0%	-	-	-

NB - Indicates that no data was collected for the period or sample size was so small that estimating frequencies will be imprecise.

4.8 Support offered to mothers to make child feeding easier

Mothers were asked if someone offered help with breastfeeding or child feeding and if so who offered help. Almost equal proportions (66% in program and 71% in control districts) received help with breastfeeding or child feeding. Of all mothers interviewed, the majority received help from grandmothers (30% in program and 37% in control districts), followed by other family members who in most cases were the older sibling of the index child (13% in program and 14% in control districts), fathers (11% in both program and control districts) and the stepmother (9% in program and 7% in control districts).

Areas where the majority of mothers reported receiving help from family members included reduction of workload in household chores (56% in program and 59% in control districts) and being offered different types of foods (23% in program and 17% in control districts). Offering help to mothers to make breastfeeding or child feeding easier for mothers seems to be cultural matter quite independent of the BCC program. Although the program did emphasise this in its messages, there was no significant difference between results of program and control communities. More women in the Brong Ahafo Region (94%) received help than their counterparts in the north, be it program or control communities (See Tables 23 and 24). Grandmothers and fathers also felt they could support mothers by reducing their workload in household chores and on the farm, and offering them more or different types of foods among others. Refer to Table 25 for responses from grandmothers and fathers on what they felt they could do to make child feeding easier.

Table 23: Help mothers received and from whom in program and control districts (2003).				
	Program	All Control	Control North	Control Brong Ahafo
Mother/mother-in-law (Grandmothers)	30%	37%	31%	57%
Husband (Fathers)	11%	11%	13%	6%
Rival	9%	7%	9%	1%
Other family member (often older children)	13%	14%	10%	23%
Neighbour	1%	1%	0%	5%
Friend	<1%	<1%	0%	1%
Other	2%	<1%	1%	0%
No help received	34%	29%	37%	6%

Table 24: Type of help received by mother in program and control districts (2003).				
	Program	All Control	Control North	Control Brong Ahafo
Specific help offered				
Reduced workload in household chores	56%	59%	49%	89%
Offered more/different types of foods	23%	17%	19%	13%
Reduced workload on farm	20%	9%	10%	5%
Encouraged to give only breastmilk for the first 6 months	8%	2%	1%	7%
Encouraged to feed the child regularly/ when it cries	7%	3%	3%	6%
Encouraged to hold the child well during breastfeeding	6%	2%	1%	5%
Other	6%	8%	6%	13%
Encouraged to put newborn to breast immediately after delivery/before bathing	4%	1%	1%	0%
Ensured that there are enough foods such as beans, groundnuts, fish, eggs for the child	4%	3%	3%	4%
Encouraged to start giving soft/mushy foods in addition to breastmilk at 6 months	3%	<1%	0%	1%
Encouraged to empty one breast before offering the other	2%	0%	0%	0%
Encouraged to offer child fruits, vegetables, fruit juice	2%	1%	1%	0%
Encouraged to add extra foods such as beans, groundnuts, fish, eggs to the child's food	2%	<1%	1%	0%
Don't remember	<1%	0%	0%	0%

Table 25: Type of help that could be offered by grandmothers and fathers to make breastfeeding or child feeding easier in program and control districts (2003).				
	Grandmothers		Fathers	
	Program	Control	Program	Control
Specific help offered				
Reduce her workload in household chores	80%	83%	36%	50%
Offer her more/different types of foods	51%	33%	73%	37%
Reduce her workload on farm	26%	17%	29%	20%
Encourage her to hold the child well during breastfeeding	20%	7%	11%	7%
Encourage her to feed the child regularly/ when it cries	17%	23%	17%	30%
Encourage her to give only breastmilk for the first 6 months	16%	17%	11%	13%
Encourage her to add extra foods such as beans, groundnuts, fish, eggs to the child's food	11%	7%	13%	13%
Encourage her to put newborn to breast immediately after delivery/before bathing	7%	10%	7%	10%
Encourage her to empty one breast before offering the other	7%	0%	1%	3%
Encourage her to start giving soft/mushy foods in addition to breastmilk at 6 months	7%	0%	3%	7%
Other	4%	17%	30%	23%
Encourage her to offer child fruits, vegetables, fruit juice	3%	0%	3%	0%
Ensure that there are enough foods such as beans, groundnuts, fish, eggs for the child	-	-	22%	20%
Nothing	0%	0%	0%	3%

NB - Indicates that no data was collected for the period or sample size was so small that estimating frequencies will be imprecise.

4.9 Exposure to print materials on infant feeding

LINKAGES began distributing print materials to partners beginning in late 2001 after an initial training on how to use them. Materials included counselling cards for mothers, larger cards for grandmothers and older women and a poster for men. All materials were designed and pre-tested in collaboration with the GHS and partners that same year (2000). It was expected that partners would in turn distribute the cards through their existing networks, train field agents in the use of these cards and eventually use them in their interaction with community members. LINKAGES annual surveys have aimed to capture data on exposure to these materials.

Forty-one percent (41%) of mothers, 36% of grandmothers, and 24% of fathers in program districts reported having been exposed to GHS/LINKAGES print materials on breastfeeding or child feeding as shown in Table 26. These results show deceases of 16% among mothers, 9% among grandmothers and 11% among fathers between the period 2002 and 2003. Among control districts less than one fifth of respondents had been exposed to the print materials. There are significantly more mothers in program than control districts with exposure to these materials. The survey results do show that mothers who have been exposed to print materials were more likely to initiate breastfeeding within the first hour and exclusively breastfeed compared to mothers with no exposure ($p<0.001$).

Table 26: The percentage of respondents who reported exposure to print materials on breastfeeding and child feeding in program and control districts.

	Mothers			Grandmothers			Fathers		
Program districts	2001	2002	2003	2001	2002	2003	2001	2002	2003
CRS	94%	92%	80%	-	-	-	-	-	-
GRCS	34%	49%	35%	-	-	-	-	-	-
ACDEP	-	65%	36%	-	-	-	-	-	-
ActionAid	-	44%	31%	-	-	-	-	-	-
FFH	-	42%	22%	-	-	-	-	-	-
NewEnergy	-	86%	70%	-	-	-	-	-	-
WFP	-	72%	60%	-	-	-	-	-	-
WVI	-	33%	45%	-	-	-	-	-	-
UNICEF	49%	35%	35%	-	-	-	-	-	-
All Program	53%	57%	41%	39%	45%	36%	37%	35%	24%
Control									
North	-	-	5%	-	-	-	-	-	-
Brong Ahafo	-	-	10%	-	-	-	-	-	-
All Control	-	-	7%	-	-	10%	-	-	17%

NB - Indicates that no data was collected for the period or sample size was so small that estimating frequencies will be imprecise.

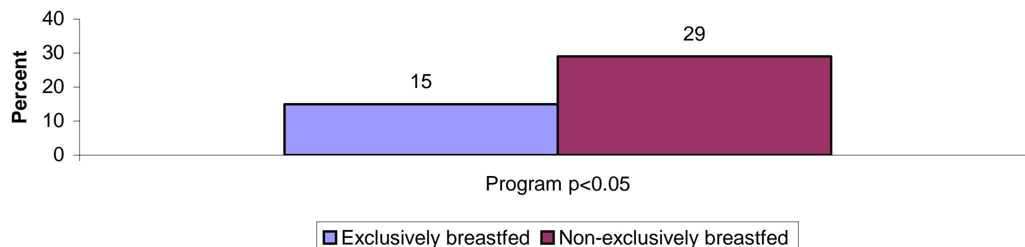
4.10 Prevalence of diarrhoea in the past 2 weeks and knowledge about prevention and management

Mothers were asked whether the index child had had diarrhoea in the two weeks preceding the interview and their knowledge concerning diarrhoeal management. Similar to findings of the 2002 RAP, children 0-<6 months (18% in program and 23% in control districts) are at lower risk of diarrhoea compared to those 6-<12 months (42% in program and 43% in control districts). Also, consistent with results of the 2002 RAP, the current study shows that exclusively breastfed children are at a lower risk of diarrhoea than non-exclusively breastfed children, as various research findings document[11] (See Fig 8).

[11] Leon-Cava N. et al. 2002. Quantifying the Benefits of Breastfeeding: A Summary of the Evidence. Washington D.C. PAHO.

During informal discussions held with mothers during the survey especially in the Northern Region, some had indicated that their children had diarrhoea shortly after receiving immunisation and felt it had caused the diarrhoea. Both formal and informal health care providers interviewed during the focus groups conducted in 2004 also indicated that some mothers and grandmothers often secretly give water to children when they are less than six months old, which may result in diarrhoea.

Fig 8: Prevalence of diarrhoea among exclusively breastfed and non exclusively breastfed children



One half (50%) of mothers in program districts and a third (34%) in control districts mentioned at least one of six ways of preventing diarrhoea: washing hands with soap before food preparation, before and after feeding and attending to a child after defecation; covering foods and drinking water; heating cold foods before eating; and exclusively breastfeeding for the first six months of life. The results in program districts show a 13% decrease in knowledge below figures recorded in 2003 on how to prevent diarrhoea. On diarrhoeal management, 45% of mothers in program districts and 22% in control could mention at least one out of the four recommended behaviours including initiating fluids, giving the child more to drink, feeding the child frequently or giving the child oral rehydration salt (ORS) and or oral rehydration therapy (ORT). It is worth noting that even though the BCC program did not cover diarrhoea prevention and management per se, it does impact on nutritional status. Specific responses given on diarrhoeal management and prevention are presented in Tables 28 and 29.

Table 27: Knowledge of at least one way of preventing or managing diarrhoea in program and control districts

	Mentioned at least one recommended way of preventing diarrhoea		Mentioned at least one recommended way of managing diarrhoea	
Program districts	**2002**	**2003**	**2002**	**2003**
CRS	82%	84%	78%	68%
GRCS	73%	87%	75%	78%
ACDEP	42%	48%	58%	71%
ActionAid	42%	36%	35%	21%
FFH	49%	27%	48%	19%
NewEnergy	11%	20%	28%	10%
WFP	62%	52%	62%	20%
WVI	41%	48%	37%	30%
UNICEF	36%	34%	59%	31%
All Program	63%	50%	66%	45%
Control				
North	-	25%	-	15%
Brong Ahafo	-	60%	-	44%
All Control	-	34%	-	22%

NB - Indicates that no data was collected for the period or sample size was so small that estimating frequencies will be imprecise.

Table 28: Knowledge of ways of preventing and managing diarrhoea in program and control districts					
	Program		All Control	Control North	Control Brong Ahafo
	2002	2003	2003	2003	2003
Prevention					
Cover foods and drinking water	49%	31%	22%	15%	41%
Wash hands with soap before food preparation	36%	24%	6%	6%	4%
Wash child's hands with soap before and after feeding	30%	21%	8%	9%	6%
Wash hands with soap after attending to a child who has defecated	23%	20%	7%	9%	3%
Heat cold foods before eating	38%	17%	6%	4%	12%
Exclusively breastfed/don't give water for the first 6 months	-	16%	6%	2%	17%
Wash hands with only water	-	4%	3%	0%	11%
Other	7%	12%	18%	9%	43%
Don't know	31%	40%	39%	48%	13%
Management					
Send child to a health facility	-	66%	55%	50%	71%
Give the child ORS/ORT	59%	40%	22%	14%	43%
Buy drugs for the child	-	28%	30%	31%	28%
Initiate fluids	14%	11%	0%	0%	0%
Give the child more to drink	12%	8%	<1%	0%	1%
Feed the child frequently	12%	8%	1%	1%	3%
Withhold fluids	6%	1%	<1%	0%	1%
Withhold foods	1%	1%	1%	0%	3%
Other	38%	4%	10%	10%	13%
Don't know	7%	3%	6%	7%	3%

NB - Indicates that no data was collected for the period or sample size was so small that estimating frequencies will be imprecise.

4.11 Common breast conditions and their management

Mothers were asked whether they know about sore/cracked nipples and/or an engorged breast and if yes, how these should be managed. Almost one half of mothers in program (47%) and control (49%) districts reported knowing about sore/cracked nipples (Table 30). Of these, very few mothers in both program (3%) and control (1%) districts knew the recommended way of treating a sore nipple which is to apply a drop of the last or hind milk to the affected nipple. Often mothers felt that they should visit the clinic or hospital for care, allow the child to suckle on the affected breast, or apply herbs. Many more mothers (79% in program and 65% in control districts) knew about breast engorgement. Of those who knew, more mothers from program districts (50%) than in control (25%) knew at least one of the recommended ways of managing an engorged breast including expressing milk from the engorged breast by hand, pump or using a warm bottle, applying warm compresses or allowing the child to suckle from the affected breast.

Table 29: Knowledge of ways of preventing and managing diarrhoea in program and control districts				
	Program	All Control	Control North	Control Brong Ahafo
Sore Nipple				
Knowledge of sore nipple	47%	49%	38%	81%
Knowledge of at least one recommended way of managing sore nipple	3%	1%	1%	2%
Specific responses on management of sore nipple				
Visit a hospital /clinic	39%	27%	29%	25%
Allow child to suckle from sore breast	25%	24%	11%	43%
Apply herbs	17%	16%	20%	11%
Apply shea butter	7%	1%	1%	2%
Stop child from suckling on sore breast	4%	0%	0%	0%
Apply hind milk	3%	1%	1%	2%
Apply gentian violet	3%	1%	2%	0%
Other	8%	5%	4%	8%
Do nothing	2%	6%	9%	2%
Don't know	18%	29%	32%	24%
Engorged breasts				
Knowledge of engorged breast	79%	65%	61%	76%
Knowledge of at least one way of managing engorged breast	50%	25%	22%	32%
Specific responses on management of sore nipple				
Allow child to feed on engorged breast	44%	14%	10%	22%
Visit a hospital/clinic	20%	42%	46%	34%
Apply herbs	19%	31%	34%	25%
Express milk	6%	9%	10%	9%
Lower breast into warm water	4%	2%	1%	3%
Apply a warm bottle	3%	1%	0%	2%
Apply shea butter	3%	2%	1%	5%
Stop child from feeding on engorged breast	3%	2%	2%	3%
Other	16%	1%	0%	3%
Do nothing	2%	4%	6%	0%
Don't know	12%	12%	13%	9%

4.12 Summary of Program Inputs in the north

LINKAGES organised a variety of workshops and activities in northern Ghana and other parts of the country each year to build and strengthen the capacity of its partners to promote optimal IYCF behaviours. At the start of the community nutrition BCC activities in the north in 2000, trainings were very intense. Seven trainings were organised that year for the three northern regions covering BFHI, Messages and Materials Development, BCC, and MtMSG.

In the year 2001, LINKAGES undertook four major activities in the north including two training of trainers (TOT) on BCC and MtMSG, an exchange conference for MtMSGs leaders and refresher conference for partners. Activities in the north gradually slowed down in 2002 as focus began shifting toward the south and pre-service capacity building. During the year 2003, four major activities were organised consisting of a lessons learned conference, one exchange conference for MtMSG leaders', one BFHI training and BCC TOT. In addition to these activities, LINKAGES co-funded an annual general meeting for the Food and Nutrition Security Network with WHO and UNICEF.

After attending these capacity building workshops, the partners went forward with organising their own trainings and tailoring interventions to meet the needs of their respective programs and communities where they work. (See Appendix E for details on LINKAGES and partner inputs).

As indicated under section 4.5, LINKAGES has funded the production and broadcast of a number of radio programs in the north. At least 495 radio programs were broadcast in English and nine local languages from the north. The bulk of these programs were broadcast during World Breastfeeding Week. Aside of these, the radio stations gave free airtime to the rebroadcast of some programs while the GHS and some NGO partners sponsored radio programs on their own.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The following are some general conclusions and recommendations derived from the final follow-up survey for consideration by the GHS, LINKAGES-Ghana and Partners, LINKAGES-DC and USAID even as the LINKAGES Project closes out in late September 2004. They are:

Breastfeeding:

- Improvements were made in EBR in both program and control districts. For program districts an 11% increase was observed from 68% in 2000 to 79% in 2003 and between 2002 and 2003, a 7% increase recorded. Some partners e.g. GRCS, NewEnergy, WFP and WVI have made considerable progress in breastfeeding rates since they began partnering with LINKAGES. Others have maintained rates that are still higher than the 1998 DHS. These progresses were as a result of partners demonstrating their commitment and enthusiasm to improving IYFC through training volunteers, targeting messages at the appropriate audiences, and continuous monitoring of program activities among others. In control districts EBR increased 25% between 2000 (44%) and 2003 (69%).

- For TIBF rate, although an 8% decline was observed between 2002 (49%) and 2003 (41%), the rate in 2003 still shows a 9% increase over rates recorded when the program began in 2000 (32%). One could argue that the decrease might not be a true decrease since proxies used in estimating breastfeeding initiation time somewhat varied especially between the 2002 and 2003 surveys. That said, there is a strong association between knowledge of TIBF and practice ($p<0.0001$) suggesting that the 41% TIBF rate for 2003 might be close to the real figure. Although the TIBF rate is considered low compared with other IYCF behaviours, it is worth noting that currently, 90% of infants in program areas are put to the breast within the first day of delivery while in control districts the figure remains at 56%, similar to the findings of the 1998 DHS. Although for a greater proportion of infants, breastfeeding was initiated later than recommended, only about one fifth of these infants received prelacteal feeds which is encouraging.

- Consistent with the findings of the 2002 RAP, knowledge levels of TIBF was lowest compared to those on feeding of colostrum to the newborn, exclusive breastfeeding for the first six months of life and introduction of appropriate complementary foods beginning at six months. While emphasising all key messages, TIBF needs a lot more highlight especially stressing on benefits to both mother and child and also the fact that children could be wiped clean without necessary bathing before putting them to the breast. Findings of FGDs conducted in early 2004 indicate that in areas with active program presence, community members do not even consider bathing as an issue but rather expulsion of the placenta and establishment of lactation as basis for early initiation.

- Diarrhoeal prevalence was nearly two times higher among non-exclusively breastfed children than exclusively breastfed children ($p<0.0001$).

Complementary feeding:

- Progress has been made regarding TCF with an 8% increase observed from 71% in 2002 to 79% in 2003. Comparing the TCF rate from the 2000 RAP (74%) to the 1998 DHS (70%), improvement has been made by the program in this area. However regarding first foods offered to children, the quality of such foods seems to have deteriorated from 2001 when the survey covered only three original LINKAGES partners to surveys in 2002 and 2003 where the results of all partners were pooled. Over this period, the proportion of mothers who enriched koko with recommended items in program districts declined from 81% in 2001, to 59% in 2002 and 48% in 2003. This is an area that partners need to strengthen by first

identifying reasons for the decline and addressing issues identified appropriately. It would be of interest for instance to find out more about the koko being offered since it may actually be weanimix, another already highly nutritious porridge that is being given and not the standard corn dough variety.

- Fewer children in control districts were reported to have received complementary foods at the recommended frequencies for target ages than their counterparts in program districts; 6-8 months (36% in control and 53% in program districts), and 9-11 months (16% in control and 21% in program districts). Nonetheless, these figures are on the low side and a possible reason might be that mothers did not take into account the frequencies at which children received snacks. It is important that whenever questions regarding feeding frequencies are posed, the intake of snacks or other foods offered such as fruits, groundnuts, roasted corn etc. be taken into account to get a better idea of frequency.

- Over 90% of children are fed directly by an adult caregiver, which in most cases was the mother of the index child, which suggests that children are being encouraged to eat. However, apart from koko where the child receives a separate serving, about 60% of young children in both program and control districts do not receive a separate serving of food but rather eat from the same bowl with other members of the family. Not only are these children possibly being offered food, which may be too spicy, but it also makes it difficult to estimate whether they have had enough to eat. Caregivers need to be encouraged to separate out the child's portion before adding the spices to the family pot.

- The consumption of foods rich in vitamin A or carotenes by young children is low. Less than 50% of children 6-<11 months received vitamin A rich foods in at least one day in the week prior to the survey. The knowledge of vitamin A rich foods was even much lower (33%) among mothers. That said, consumption patterns of vitamin A rich foods were higher in the Brong Ahafo Region than the north. The pattern could be attributed to access of red palm oil, which is rich in beta-carotenes and more available in southern than northern Ghana. Although it has been a challenge in many developing countries demonstrating sustained improvements in vitamin A status from dietary sources and vitamin A supplementation does seem to be the way out, the GHS and its partners are urged to intensify their education on dietary sources of the vitamin.

<u>Other results:</u>

- Health workers and the radio remain the major sources of information on IYCF among primary and secondary target audiences of the BCC program. These not withstanding, family members and other community networks and /or activities such as mothers/mothers-in-laws, MtMSGs, community volunteers and durbars were mentioned as important sources of information and should be continually used to disseminate messages to effect behaviour change. The capacity of these channels and networks need be reinforced with updated information so that it can be shared with community members.

- Community members' exposure to the GHS/LINKAGES print materials decreased between the years 2002 and 2003 among all target audiences. Partners are encouraged to continue to actively use these materials in their educational sessions and BCC activities, as these will help standardise key messages and improve recommended IYCF. The results of the survey show a strong association between exposure to print materials and optimal breastfeeding behaviours such as initiating breastfeeding within the first hour of delivery and exclusive breastfeeding.

- Family members offering mothers various forms of help to make child feeding easier are inherent part of many cultures. Although the program placed a lot of emphasis on family members offering help to mothers, there seems to be no significant difference between results in program and control districts. Almost equal proportions of mothers received help or support from family members in reduction of workload on the farm and household chores and being offered variety or different types of foods. Mothers had also indicated during the focus groups held in April 2004 that they would like their husbands to spend a lot of their free time with them at home.

General Conclusions:

- Over the past several years, important progress has been made toward improving IYCF practices in all three northern regions. A number of players have contributed to this success including the GHS, LINKAGES and LINKAGES' numerous partners. An excellent sense of team spirit across organisational and geographic borders has been created through the project and partners are committed to maintaining and even improving on what they have been able to achieve by working together. With the closure of LINKAGES in September 2004, the Nutrition Unit in Accra and the Regional Health Management Team (RHMT) in the Northern Region will carry on the task of maintaining the enthusiasm of partners through regular communications and meetings so that the work continues to move forward for years to come.

- Although gains were achieved, these gains would have even been more remarkable had the survey been able to focus on areas where partners were really promoting IYCF. Some partners had indicated from the beginning of their collaboration with LINKAGES their intent to work in specified areas. Attempts by the authors to confirm whether these partners were indeed working in the areas specified failed hence the survey covered all of these partner program areas – both active and inactive.

- A suggestion for the future, should the GHS and partners continue tracking trends in IYCF patterns in the north and elsewhere is that similar methods and instruments to the ones that have been used over the years for the LINKAGES RAP surveys be used. These annual surveys have proved to be powerful tools for motivating the partners over the years, helping them to pinpoint weak areas for fine-tuning their interventions and messages focus on a regular basis.

- **6.0 APPENDICES**

APPENDIX A: A LIST OF SUPERVISORS AND INTERVIEWERS WHO PARTICIPATED IN DATA COLLECTION

No.	FULL NAME OF PARTICIPANT	ORGANISATION	MAILING ADDRESS	Tel/Fax/ Email Contact	DISTRICT	REGION
			Supervisors			
1.	Robert Akaribo	ACDEP	Box 1411	071 26449, 071 23807 024 544001	Tamale	N/R
2.	Philip Anum	GHS	GHS. Box 4. Sandema		Builsa	UE/R
3.	Sofo Mutaru	GHS	GHS. Box 8. Yendi	0744-22105	Yendi	N/R
4.	Nwadei Kenneth	GHS	GHS. Box 3. Nadowli	0756-22922	Nadowli	UW/R
5.	Ali Mohammed	UDS	SMHS. UDS. Box 1883. Tamale	Bateeisimah@yahoo.com		N/R
6.	Gilberta Akuka	GRCS	Box 330, Bolga	072-24278	Bolga	UE/R
7.	Mahama Saaka	GHS	Box 231, Wa	0756 22016	Wa	UW/R
8.	Tibilla Moses	GHS	Box 99	071-22146 024-779640	Tamale	N/R
9.	Clement Adams	CRS	Box 334	071 22646, 23151	Tamale	N/R
10.	Elizabeth Naah	CRS	Box 334	071 22646, 23151	Tamale	N/R
11.	Sabie Naah Aiden	CRS	Box 334	071 22646, 23151	Tamale	N/R
12.	Paul Aryee	SMHS-UDS	Box 1883	024 577641	Tamale	N/R
13.	Eunice Adjei	LINKAGES Project	Box OS 1175. Accra	021-7010500	Accra	GA/R
			Interviewers			
14.	Alhassan A. Salam Zibilila	CYDE	Box 335	071-22826 071 24940	Tamale	N/R
15.	Charles Nachinab	NewEnergy	Box 811, Tamale	071 23086 024 733973 nachinab@yahoo.com	Tamale	N/R
16.	James Azika	-	Box 724. Bolga	072-22915	Bolga	UE/R
17.	Joseph Aserekama	Ghana Red Cross	Box 330. Bolga	072-24278 024-897174	Bolga	UE/R
18.	William N. Kukeba	Ghana Red Cross	Box 330. Bolga	024-743514 072-23310	Bolga	UE/R
19.	Stephen W. K. Putieru	Ghana Red Cross	Box 330. Bolga	072-24278	Bolga	UE/R
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23.	Alex Bipuah	-	Box 8. Tumu	0756-22148	Sissala	UW/R

No.	FULL NAME OF PARTICIPANT	ORGANISATION	MAILING ADDRESS	Tel/Fax/ Email Contact	DISTRICT	REGION
24.	Bawah Seidu	-	Box 87. Tumu	024-710734	Sissala	UW/R
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26.	Abdul Aziz Bilal	-	Box 2. Gambaga	071-23794	East Mamprusi	N/R
27.	Edward Samari	ACDEP	Box 7. Walewale	0715-22057	West Mamprusi	N/R
28.	Ellen Acheampong	-	Box MB. 328. Accra	021-244000 021-661696	Accra	N/R
29.	Francisca Bagni	-	Box 17. Lawra	0756-22802 0756-22809	Lawra	UW/R
30.	Prudence Yipare	WFP	Box 3. Nadowli	0756-22922 0756-22921	Nadowli	UW/R
31.	Grace Danlara	-	Box 48. Jirrapa	0756-22881	Jirrapa	UW/R
32.	Samuel W. Ouedrago	-	Box 1094. Tamale	071-25199	Tamale	N/R
33.	Tanko Baba	UNICEF	Box 1. Yendi	0744-22128	Yendi	N/R
34.	Andani Yakubu	-	C/o Fuseini Busagri. Ghana Post. Tamale	071-25612	Tamale	N/R
35.	Asakugri A. Jacob	-	St. Charles Warga Catholic Church. Box 37. Zebilla		Bawku West	UE/R
36.	Asore Williams	-	St. Charles Warga Catholic Church. Box 37. Zebilla		Bawku West	UE/R
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40.	Sayibu A. Wumpini	-	Box TL 1882. UDS		Tamale	N/R
41.	John Eliasu Mahama	-	Box TL 1350. Tamale	071-25557, 024-818391 eliasujohn@yahoo.com	Tamale	N/R
42.	Abubakari Abdul-Razak	-	Box TL 1288. Tamale	071-25186, 024-874951 goldenrazak@yahoo.com	Tamale	N/R
43.	Imoro Nafisatu	-	Box 1882, UDS. Tamale		Tamale	N/R
44.	Salifu Enoch I.	-	Box 1882, UDS. Tamale		Tamale	N/R
45.	Sumani Mumuni Kamal	-	Box 1882, UDS. Tamale		Tamale	N/R
46.	Zakariah Amiratu	-	Box TL 1119. Tamale	071-24940, 0717-22026	Tamale	N/R
47.	Kusaah Edward Baba	-	Box 1882, UDS. Tamale		Tamale	N/R
48.	Abdulai Rashid	-	C/o the HOD. Community Nutrition Department. UDS. Tamale	rashcomgh@yahoo.com	Tamale	N/R
49.	Sumayatu Haruna	-	C/o Abdulai a. Kaleem. Sch of Hygiene. Box 88. Tamale	071-26320	Tamale	N/R
50.	Abdallah Mohamed	-	GHS. Nutrition Unit. Box TL. 99. Tamale	071-22146	Tamale	N/R
51.	Abubakari Mumuni	-	CNC. Box 2. Bole		Bole	N/R

APPENDIX B: BRIEF OVERVIEW OF PARTNER FIELD PROGRAMS

- **Ghana Health Service:** The GHS has an important network of nutritionists based in regional capitals, districts and occasionally in sub-districts throughout the country. Many of these nutritionists have participated in LINKAGES-sponsored nutrition policy events and workshops and are strong advocates for improving infant feeding practices. In the north, the GHS at the regional, and many of the district and sub-district levels has been actively involved in all phases of the community outreach component of the GHS/LINKAGES Project, both independently and in collaboration with partner NGOs.

  The GHS has for several years now been conducting promotional activities on IYCF practices through nurses and other health professionals at static daily and weekly antenatal, postnatal and child welfare clinics. Public and community health nurses of the service also address these issues at the community level during outreach (baby weighing/growth promotion) sessions and home visits.

- **Catholic Relief Services (CRS):** The beneficiaries of CRS/Ghana's Food Assisted Child Survival (FACS) programs are primarily women and children living in food insecure households in rural farming communities. Focus communities are located in three districts from each of the three northern regions of the country. CRS reaches this population through a variety of community and health facility-based child survival/nutrition interventions in collaboration with the GHS. The CRS FACS project began in October 1997. In September 2003, the program significantly expanded with the support from Food for Peace and extended for an additional five years.

- **The Ghana Red Cross:** The Ghana Red Cross has an extensive network of mother's clubs operating throughout the country, especially in the north and upper east in particular. These clubs address community development and social service issues. Popular topics are nutrition, children's health, immunizations, community hygiene and income-generating activities. The Ghana Red Cross launched a child survival project in the Upper East with a significant infant feeding component in September 1999. Other topics being addressed by the project include malaria, HIV/AIDS, diarrhoeal disease and acute respiratory infections (ARI). The program was completed in July 2002, and trainings and refreshers ended in April that same year. In spite of this, monitoring activities continue to take place on a regular basis. Additional funding is being solicited.

- **United Nations Children's Fund (UNICEF):** The Ministry of Local Government, with other government agencies and UNICEF, is implementing child survival programs as one of several interconnected community development programs in northern Ghana. The programs work through community health nurses and teams comprised of extension agents, disease surveillance agents, non-formal education literacy teachers, civic educators, agricultural extension agents, District Assemblies and community representatives. As early as 1999, UNICEF invited LINKAGES to work with them on nutrition behaviour change communication as an important feature of its development work in the north. UNICEF's Mid Term Review (MTR) of its Plan of Operations conducted in 2003 included nutrition BCC.

- **Association of Church Development Projects (ACDEP):** ACDEP is a network of church sponsored development projects. The current portfolio includes 40 agricultural, water, health and nutrition projects located throughout the three Northern Regions. The main objective of the network is to enhance further the development efforts of individual churches as well as provide a collective platform for their participation in the socio-economic development of the rural poor in Northern Ghana. ACDEP members use a number of approaches to address nutrition issues. This includes conducting growth monitoring/promotion at the facility level and during community outreach work, and giving health talks on infant feeding during home visits. ACDEP works through women and men's groups, volunteers, TBAs and health workers. Some project members also run nutrition rehabilitation centres. Additionally, the association operates a micro-credit facility for women.

- **ActionAid:** ActionAid Ghana works in the three Northern and Brong Ahafo Regions to improve access to services to the poor through the use of participatory methodologies. The services provided are in the areas of basic education and the development of peer education strategies for HIV/AIDS, institutional capacity building, advocacy, increasing household food security levels by training farmers in modern agricultural practices and the provision of dams and emergency relief services. ActionAid is collaborating with the Centre for Youth Development and Empowerment (CYDE) in the Tamale Municipality and the DHMT in the West Gonja District of the Northern Region to implement strategies that improve IYCF practices in collaboration with the GHS/LINKAGES Project.

- **Freedom From Hunger (FFH):** FFH works with Rural Banks to develop and disseminate a cost-effective integrated program strategy called "Credit with Education" for the purpose of improving the nutritional status and food security of poor households in rural areas around the country. The "Credit with Education" program offers three key services to poor women in rural communities namely:

    1. Community-based financial services that provide borrowing and saving opportunities;
    2. Non-formal education that offers guidance in maternal and child health and nutrition particularly breastfeeding, child feeding practices, diarrhoeal disease treatment and prevention, immunisations, HIV/AIDS and family planning; and
    3. Providing a forum for peer group support.

- **NewEnergy:** NewEnergy uses a holistic approach to development aimed toward facilitating the improvement and management of rural infrastructure essential for enhancing the quality of life of rural people. In collaboration with development partners, NewEnergy provides a number of products and services including renewable energy information, solar lanterns and home systems, solar water pumping systems, energy efficiency education, water and sanitation services, and micro-credit and enterprise initiatives. Through its new partnership with LINKAGES, New Energy piloted a Nutrition BCC program in 10 communities in the West Mamprusi District and has expanded the program to the Gushegu Karaga District of the Northern Region.

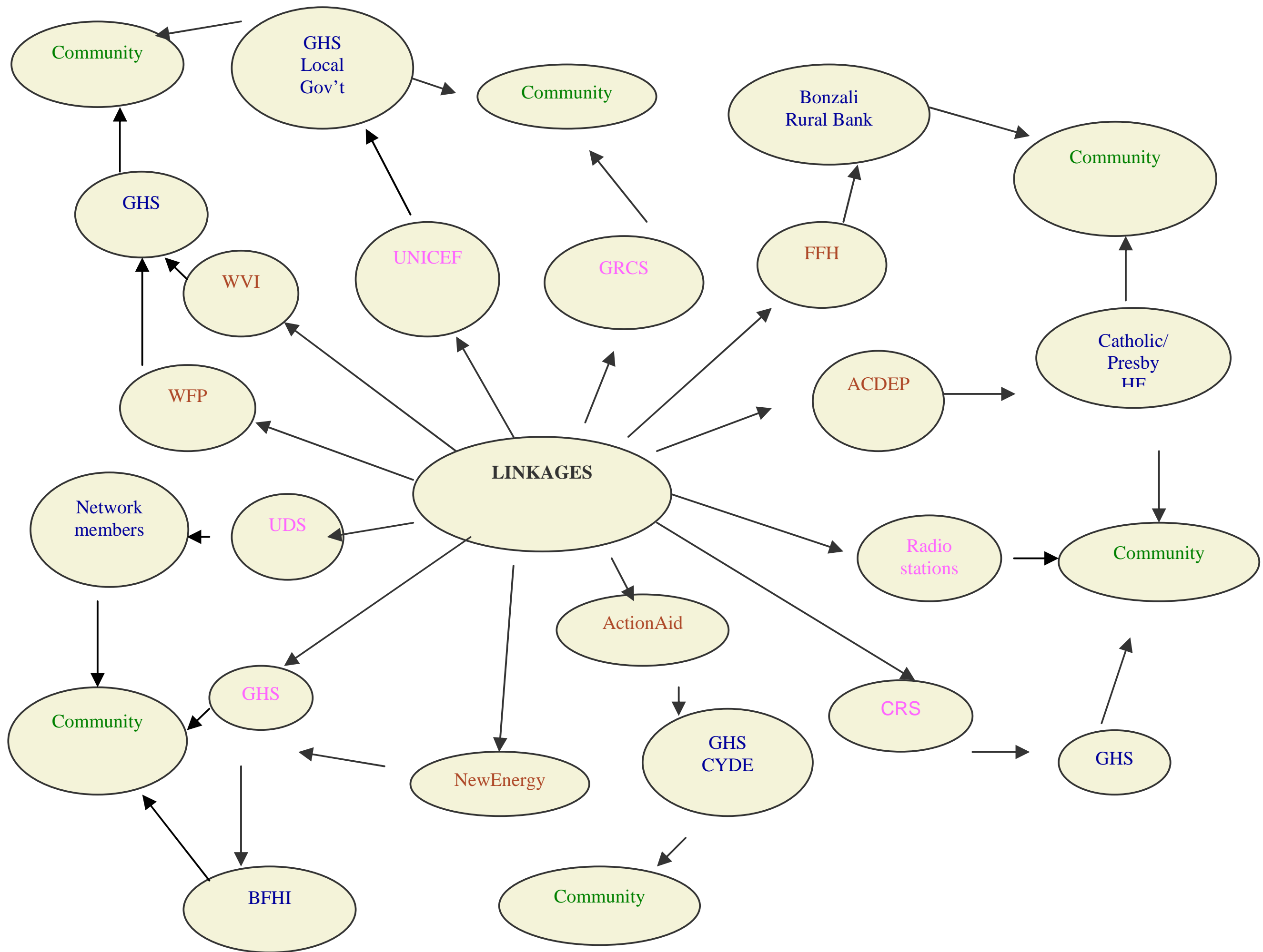
- **World Food Program:** The GHS/Nutrition Unit collaborates with the WFP in executing a food supplementation program in five regions of the country where malnutrition rates are considered the most acute. Currently these regions include Ashanti, Western and the three Northern Regions although it is expected that Ashanti and Western will be phased out of the program over the next few years. Under this program, food rations are distributed to pregnant and lactating women as well as children 1-3 years of age at feeding centres in select communities during periods of the year when food is particularly scare. Centre attendants who have been trained to conduct growth monitoring also educate mothers on basic nutrition and hygiene.

- **World Vision International:** World Vision International operates a holistic community-based development program in mostly marginalized rural areas of the country. The program areas are health and sanitation, education, agriculture, gender and development, micro-enterprise and income generation. The organisation works with other existing networks such as the GHS, Ministry of Food and Agriculture and the Ghana Water Company among others. Under its health program, WVI provides potable water and Ventilated Improved Latrines, health infrastructure development, and nutrition education. WVI operates through the establishment of Area Development Programs in all 10 regions of the country.

- **Mass media:** Journalists and broadcasters from three FM stations in the north namely Radio Savannah, URA Radio and Radio Progress have participated in GHS/LINKAGES trainings and incorporate IYCF issues in their broadcasts with support coming from LINKAGES and other partners. Popular formats used have included radio call in shows, panel discussions and personal testimonies with village leaders, comedies and drama, and educational songs and contests. Broadcasts are done in nine major local languages and English and reach 16 out of 24 districts in the north. Four out of eight remaining districts receive partial coverage from these stations although a repeater station was recently installed in Yendi which will greatly enhance radio coverage to the eastern corridor of the Northern Region.

- **University of Development Studies (UDS)**: LINKAGES has been collaborating with UDS through its Food and Nutrition Security Unit and members stationed in various parts of the country to disseminate nutrition information in ways that are easily understood at the community level. Through the support of LINKAGES, a Nutrition Information Hub has been established at the UDS campus at Nyankpala with the purpose of facilitating access to information on nutrition and food security and to advocate for improved policies.

APPENDIX C: Partner networks



APPENDIX D: SURVEY SUMMARY SHEET

COUNTRY: Ghana

INSTRUMENT: Follow-up survey of breastfeeding and complementary feeding knowledge and behaviours.

Mothers of children<12months
Grandmothers and Fathers.

MONTH/YEAR: December 2003

Written language of instrument: English
Survey done in other languages? Yes; Gurune, Dagbani, Mampruli, Kusal, Dagaare, Gonja, Sissala, Twi

Management

In Washington:
Administrative Manager: Claudia Gray
Technical backstop: Nadra Franklin, Michael Hainsworth, Joan Schubert

Locally:
Administrative Manager: Charlotte Acquah
Technical Manager: Eunice Adjei

Timeline of survey events

Event	Date started	Date completed
Development of instrument	September 2003	December 2003
Sampling design	September 2003	December 2003
Field test of instrument	December 13, 2003	December 15 2003
Training of interviewers / supervisors	December 12, 2003	December 16 2003
Data collection	December 17, 2003	December 22 2003
Data entry	January 5, 2004	January 31, 2004
Data cleaning and analysis	February 1, 2004	March 1, 2004
Draft Report	April 1, 2004	July 12, 2004
Other: ___________________________		

Sampling

Sampling methodology: A stratified multistage cluster sampling was used to take separate samples for coverage areas for nine LINKAGES partners in the north and control areas in the north and Brong Ahafo Region of Ghana. Ten (10) clusters were selected from communities within each NGO partner area and also from each of the two districts in the north. Ten (10) clusters in total were also selected from the Brong Ahafo Region. From each cluster, six children 0-<6 months and four of age 6-<12 months were randomly selected from households and included in the survey. In about 10% of all households with eligible children, the father and/or the grandmother of the child were interviewed.

Sampling frame: Lists of communities/districts with their respective population sizes provided by all NGOs (CRS, UNICEF, Ghana Red Cross, ACDEP, ActionAid, FFH, NewEnergy, WVI and WFP) and the Population Census Secretariat were used.

Sample size: The total sample size for each group is as follows;
Mothers of children< 12 months of age: 1200
Grandmothers: 120
Fathers: 120

Field test:

Where field-tested: The instruments for separate targets; mothers, grandmothers and fathers were pretested as part of interviewer training in the Tamale Municipality of the Northern Region from December 13th-16th 2003.
Who field-tested: This was conducted by 38 interviewers and supervised by 13 persons with a wealth of experience in surveys.

Indicators

Impact indicators listed in LINKAGES M&E Plan

Indicator	Definition used		How question was asked
	Numerator	Denominator	
EBR rate (24 Hours)	Infants 0-<6 months who received only breastmilk or breastmilk with vitamins, mineral supplements, or medicines in the previous 24 hours	All infants 0-<6 months	24 hour recall Q15 (i) “ Since this time yesterday, has (name of child) received any of the following: A. Breastmilk B. Vitamins/minerals supplements or medicines”
EBR rate (7 Days)	Infants 0-<6 months who received only breastmilk or breastmilk with vitamins, mineral supplements, or medicines in the previous 7 days	All infants 0-<6 months	7 day recall Q 15 (ii) “ If the answer for the past 24 hours is 2. No ask: Did (name of child) receive this in the past 7 days: A. Breastmilk B. Vitamins/minerals supplements or medicines” NB: A and B received in the past 24 hours were automatically coded 1.Yes during analysis for the past 7 days.
TIBF rate	Infants 0-<12 months who were put to the breast within 1 hour after birth	All infants 0-< 12 months	Q11 “How long after birth was (name of child) put to breast ” 1. Less than one hour
TCF rate (24 hours)	Infants 6-<10 months who received breastmilk and solid or semi-solid food in the past 24 hours	All infants 6-<10 months	24 hour recall Q15 (i) “Since this time yesterday has (name of child) received any of the following: A. Breastmilk I-P. A list of semi-solids and solids”.
TCF rate (7 Days)	Infants 6-<10 months who received breastmilk and solid or semi-solid food in the past 7 days	All infants 6-<10 months	7 day recall Q15 (i) “If the answer for the past 24 hours is 2. No ask: Did (name of child) receive this in the past 7 days? A. Breastmilk I-P. A list of semi-solids and solids”. NB: A, and I-P received in the past 24 hours were automatically coded 1.Yes during analysis for the past 7 days.

Other selected indicators included in survey:

Indicator	Definition used		How question was asked
	Numerator	Denominator	
% of children who received prelacteal feeds	Infants 0-<12 months who were offered plain water or other liquid/food apart from mother's own breastmilk to eat or drink after delivery	All infants 0-< 12 months	Form 1 Q12. "Before putting (name of child) to the breast for the first time after delivery was anything offered to him to eat or drink apart from your breastmilk?" Q13. "If yes what was offered him/her to drink?" 1. Plain water or with additives 3. Other (specify)
% of children who received enriched porridge	Infants 6-<11 months who received porridge with nutrient rich items added	All infants 6-<11 months who received porridge	Form 1 Q16 "Since this time yesterday/past 7-days, has (name of child) received koko?" Q16 "If the child received koko in the past 24 hours or 7 days, was anything added to it?" A-G. A list of nutrient rich foods.
% of children who had a separate serving of other foods	Infants 6-<11 months who received a separate serving of other foods	All infants 6-<11 months who had started eating in addition to breastmilk	Form 1 Q21 "Apart from koko, is (name of child's) food served separately in his/her own plate/bowl"?
% of mothers who reported use of a bottle with a nipple	Infants 0-<12 months who drank anything from a feeding bottle in the past 7 days	All infants 0-< 12 months	Form 1 Q22. "In the past 7 days did (name of child) drink anything from a feeding bottle?"
Diarrhoeal prevalence in the past two weeks	Infants 0-<6 months who had diarrhoea in the past two weeks	All infants 0-< 6months	Form 1 Q 23. "Has (name of child) had diarrhoea that is, loose or watery stools in the last 2 weeks"?
% of mothers who reported at least one way of preventing diarrhoea	Mothers of Infants 0-<12 months who reported at least one way of preventing diarrhoea	All mothers of infants 0-< 12 months	Form 1 Q 28. "What should be done to prevent a child from getting diarrhoea?" A-F. List of ways to prevent diarrhoea
% of mothers who reported at least one way of managing diarrhoea	Mothers of Infants 0-<12 months who reported at least one way of managing diarrhoea	All mothers of infants 0-< 12 months	Form 1 Q 27. "What would you do if (name of child) has diarrhoea?" A-D. List of ways to manage diarrhoea
% of mothers who recalled at least one breastfeeding/comple-mentary feeding radio message	Mothers of infants 0-<12 months who recalled at least one specific breastfeeding/comple-mentary feeding radio message	All mothers of infants 0-<12 months	Form 1 Q31. " What did you hear: A-K: A list of breastfeeding/complementary feeding messages mentioned spontaneously"
% of grandmothers who recalled at least one breastfeeding/ complementary	Grandmothers of infants 0-<12 months who recalled at least one specific	All grandmothers of infants 0-<12 months	Form 3 Q6. " What did you hear: A-K: A list of breastfeeding/

Indicator	Definition used		How question was asked
	Numerator	Denominator	
feeding radio message	breastfeeding/ complementary feeding radio message		complementary feeding messages mentioned spontaneously"
% of fathers who recalled at least one breastfeeding/ complementary feeding radio message	Fathers of infants 0-<12 months who recalled at least one specific breastfeeding/ complementary feeding radio message	All fathers of infants 0-<12 months	Form 3 Q6. " What did you hear: A-K: A list of breastfeeding/ complementary feeding messages mentioned spontaneously"
Exposure to print materials (mothers)	Mothers of infants 0-<12 months who report exposure to print material on breastfeeding and complementary feeding	All mothers of infants 0-<12 months	Q41. " Has anybody talked to you about breastfeeding or child feeding showing you a card a like this? Show a sample of LINKAGES card pictures"
Exposure to print materials (grandmothers)	Grandmothers of infants 0-<12 months who report exposure to print material on breastfeeding and complementary feeding	All grandmothers of infants 0-<12 months	Q16. " Has anybody talked to you about breastfeeding or child feeding showing you a card a like this? Show a sample of LINKAGES card pictures"
Exposure to print materials (fathers)	Fathers of infants 0-<12 months who report exposure to print material on breastfeeding and complementary feeding	All fathers of infants 0-<12 months	Q16. " Has anybody talked to you about breastfeeding or child feeding showing you a card a like this? Show a sample of LINKAGES card pictures"

Results

Indicator	Program districts		Control districts	
	Value (%)	**CI ***	**Value (%)**	**CI ***
EBR (24-hour recall)	79	82-76	69	76-62
EBR (7-day recall)	78	82-74	67	74-60
TIBF	41	44-38	14	18-10
TCF (24-hour recall)	79	84-74	64	74-54
TCF (7-day recall)	84	88-80	70	79-61
% of children who received prelacteal feeds	13	16-12	16	20-12
% of children who received enriched porridge	48	54-42	48	59-37
% of children who had a separate serving	39	45-33	35	46-25
% of mothers who reported use of a bottle with a nipple	8	10-6	12	16-8
Diarrhoeal prevalence in the past two weeks	18	21-15	23	29-17
% of mothers who reported at least one way of preventing diarrhoea	50	53-47	34	39-29
% of mothers who reported at least one way of managing diarrhoea	45	48-42	22	27-17
% of mothers who recalled at least one breastfeeding/complementary feeding radio message	44	47-41	28	33-23
% of grandmothers who recalled at least one breastfeeding/ complementary feeding radio message	41	51-31	33	50-16
% of fathers who recalled at least one breastfeeding/ complementary feeding radio message	71	80-62	53	71-35
Exposure to print materials (mothers)	41	44-38	7	10-4
Exposure to print materials (grandmothers)	36	46-26	10	21-1
Exposure to print materials (fathers)	24	33-15	17	30-4

*95% CI

APPENDIX E: PROGRAM INPUTS

E1: CUMULATIVE REPORT ON TRAININGS CONDUCTED BY LINKAGES IN THE NORTHERN, UPPER EAST AND UPPER WEST REGIONS OR IN THE SOUTH BUT WITH PARTICIPANTS ATTENDING FROM THE NORTH

DATE	TYPE OF TRAINING/ ACTIVITY	WORKSHOP PARTICIPANTS	TOTAL
YEAR 2000			
January 24-February 5	Messages & Materials Development Workshop I	Radio stations, CRS, UNICEF, GRCS, GHS, NewEnergy	35
March 8-14	Messages & Materials Development workshop II	Radio stations, CRS, UNICEF, GRCS, GHS, NewEnergy	34
March 20-30	Mother-mother support group	CRS, UNICEF, GRCS, GHS, UDS	24
May 25-June 7	Nutrition Behaviour Change Communication I	Radio stations, UNICEF, GRCS, GHS, UDS	23
June 12- 23	Nutrition Behaviour Change Communication II	Radio stations, CRS, GRCS, GHS	27
September	BFHI training for GHS staff in the East Mamprusi District	GHS health workers	153
December 18-20	Messages & Materials workshop III (Print materials)	Radio stations, CRS, UNICEF, GRCS, GHS, NewEnergy	36
YEAR 2001			
March 2001	Nutrition Behaviour Change Communication	Radio stations, CRS, UNICEF, GRCS, GHS, NewEnergy, WVI, ACDEP, ActionAid, FFH,	34
April 23rd -May 4th	TOT in BCM and Mother-to-Mother Support Group	Radio stations, CRS, UNICEF GRCS, GHS, NewEnergy, WVI, ACDEP, ActionAid, FFH, UDS	25
May 7th –8th	Mother-to Mother Support Group Exchange	CRS, GRCS	20
December 4-7th	Partner Refresher training	Radio stations, CRS, UNICEF GRCS, GHS, NewEnergy, WVI, ACDEP, ActionAid, FFH, UDS	45
YEAR 2002			
January 14-25	Nutrition Basics and Behaviour Change Communication	Radio stations, GHS, CRS, UNICEF GRCS, NewEnergy, ACDEP, ActionAid, FFH, WFP, UDS, Africare	38
May 26-June 7	TOT in BFHI	GHS, UDS	25
July 8-19	TOT in BCM and Mother-to-Mother Support Group	Radio stations, UNICEF, GRCS, GHS, WVI, NewEnergy, ACDEP, ActionAid, WFP, UDS	24
YEAR 2003			
February 17th-20th	Lesson's Learned and Way Forward Conference	Radio stations, UNICEF, GRCS, GHS, WVI, NewEnergy, ACDEP, CRS, ActionAid, WFP, UDS, USAID, CARE Ethopia and Atlanta	66
May 20th 24th	5th Annual General Meeting of the Food Nutrition Security Network on the theme "Effective IYCF: the Role of Nutrition BCC. This meeting was funded by LINKAGES, UNICEF and WHO	FNSN members nationwide	83
July 9th-11th	Mother-to Mother Support Group Exchange	UNICEF, GRCS, GHS, NewEnergy, WVI, ACDEP, CRS, ActionAid, WFP, from the north and south	74
July 28th –August 8th	BCC and IYCF	FNSN members nationwide	30
September 15th-26th	TOT in Mother-to-Mother Support Group	11 out of 20 participants came from the north and represented CRS, UNICEF, and UDS	11
September 22nd-27th	BFHI training for GHS staff in the Gushegu Karaga District	Health workers from 7 facilities in the Gushegu Karaga District	59

NB: Some participants may have attended multiple trainings

E2: LINKAGES SPONSORED RADIO BROADCASTS IN THE NORTHERN, UPPER EAST AND UPPER WEST REGIONS

Station	Year	Number of languages	Total number of broadcasts
Radio Savannah	2000	3 (English, Dagbani, Gonja)	59
	2001		66
	2002		21
	2003		51
URA Radio	2000	-	-
	2001	5 (English, Gurune, Kusaal, Kasem, Buli)	100
	2002		61
	2003		52
Radio Progress	2000	-	-
	2001	3 (English, Dagaare, Sissali)	30
	2002		12
	2003		19*
Radio Upper West	2000	-	-
	2001	-	-
	2002	3 (English, Dagaare, Sissali)	30
Total		**9**	**501**

*** The cost of broadcasting six of the 19 programs on Radio Progress were born by the station and not by LINKAGES**

E3: PARTNER LEVEL OF INPUTS

Organisation	Year	District/Region	No. of Trainings Organised	Numbers of people trained	Topics covered	No. of MtMSG formed	No. of durbars/ awareness meetings/ activities held
GHS	2001	Tolon Kumbungu	1	32	Lactation management	-	1 (Miss Ghana 2000 launched exclusive BF in the Northern Region) 1 (Upper West Region)
		Northern, Upper East & Upper West	1	80	Public health issues including lactation management	-	
		Upper East	1	50	Lactation management	-	
		Bawku East & West	1	50	Lactation management and BFHI	-	
		Wa, Jirapa Lambussie	1	53	Lactation management and BFHI	-	
	2002	Tolon Kumbungu	1	34	Counselling on infant feeding	-	
	2003	Wa	-	-	-	-	The GHS collaborated with two radio stations (Radio Progress and radio Upper West to have a month long celebration and awareness creation for WBW
		Northern		208	BFHI	167	1 Launched BF week at Tolon Kumbungu
		Tolon Kumbungu	2	60 43	TBA training Community based growth promotion	39	3
CRS	2000	East Mamprusi	1	22	Formation of MtMSG	86	1
		Bongo	5	193	Improved nutrition, utilisation of soya		6
		Lawra	1	35	Formation of MtMSG		-
	2001	East Mamprusi, Bongo, Lawra	3	232	BCC, use of counselling cards, the production and utilisation of soya, growth monitoring and promotion		2
	2002	East Mamprusi, Bongo, Lawra	-	-	-	-	3 Community durbars

Organisation	Year	District/Region	No. of Trainings Organised	Numbers of people trained	Topics covered	No. of MtMSG formed	No. of durbars/ awareness meetings/ activities held
GRCS	2000	Bolga, Bawku East, Bawku West, Builsa	5	330	BF, malaria, diarrhoea, ARI, and immunisation	477	-
		Yendi	1	30			
		Tamale	1	9			-
	2001	Northern, Upper East and upper West Regions	6	478	BF, CF, use of LINKAGES print materials		-
	2002	Bolga	1	78	BF, CF, MtMSG		
		Tamale	7	239	-	12	
	2003 -	Bolga, Bawku East, Bawku West, Builsa, Bongo, Kassena Nankana	1	75	BF, CF, MtMSG	75	5 route marches, football marches and clean-up campaigns
		Northern	-	-	-	-	2 clean up campaigns and community health talks
		Wa	-	-	-	2	8 Focal person took advantage of her new appointment as supervisor on the guinea worm program to talk on BF in 8 communities
		Lawra	-	-	-	-	5 Made up of clean up campaigns, route march
		Brong Ahafo	-	-	BF, CF, MtMSG	8	2

Organisation	Year	District/Region	No. of Trainings Organised	Numbers of people trained	Topics covered	No. of MtMSG formed	No. of durbars/ awareness meetings/ activities held
UNICEF/ GHS	2000	Yendi	3	100	Lactation management	10	2
		Tolon Kumbungu	2	152	Community based rehabilitation for the blind and nutrition BCC	6	-
		-	-	-	-	-	6 (Builsa)
	2001	Yendi	4	138	Lactation management and BCC	10	10
		Tolon Kumbungu	1	32	Lactation management	3	10
		Savelugu Nanton	2	57	Lactation management, facilitating MtMSG	120	-
		Zabzugu Tatale	2	53	Lactation management	4	1
		Builsa	1	20	Facilitating MtMSG	15	-
	2002	Yendi	1	15	Sensitisation including the need for regular meetings of MtMSG	4	5
		Builsa	# not known	2,500	BCC, BF, BF	-	-
	2003	Yendi	3	136	BF, BF	34	7 sensitisation meetings
		Savelugu Nanton	1	30	Formation of MtMSG	120	Sensitisation meetings in 50 communities Over 60 awareness activities during WBW
		Builsa	1	57	Facilitation skills, community mobilisation, Exclusive BF and CF, use of counselling cards, conduct of home visits	-	-

Organisation	Year	District/Region	No. of Trainings Organised	Numbers of people trained	Topics covered	No. of MtMSG formed	No. of durbars/ awareness meetings/ activities held
ACDEP	2001	East Mamprusi	1	41	BCC, Exclusive BF and CF	-	-
		West Mamprusi	1	81	Exclusive BF, CF and management of MtMSG	6	-
		Bolga	3	62	BCC, Exclusive BF and CF	14 (1997-2001)	-
	2002	East Gonja	5	203	BCC in BF and CF, micronutrient deficiency and prevention, HIV/AIDS, formation of MtMSG	10	3
		West Mamprusi	1	90	Infant feeding and BCC	-	3
		-	-	-	-	9 (Bolga)	1
	2003	Bolga	2	220	Refresher on Exclusive BF and CF	-	-
		Tamale	1	14	BCC	-	-
		Salaga	1	10	Community growth monitoring and promotion	-	-
		West Mamprusi	-	-	-	3	1
ActionAid	2001	Tamale	2	90	BCC, BF, CF	30	1
		West Gonja	3	110	Exclusive BF, CF	11	-
	2002	Tamale	2	82	BCC, BF, CF and a forum to share experiences and challenges	5	1
		West Gonja	1	120	BCC, BF, CF and formation of MtMSG	4	4
	2003	Tamale	2	112	Exclusive BF and CF	7	1
		West Gonja	1	60	BCC, BF, CF	7	5
FFH/Bonzali Rural Bank	2001		-	-	-	4	-
	2002		-	-	-	-	-

Organisation	Year	District/Region	No. of Trainings Organised	Numbers of people trained	Topics covered	No. of MtMSG formed	No. of durbars/ awareness meetings/ activities held
NewEnergy	2001	West Mamprusi	2	45	BCC, exclusive BF, CF	-	-
	2002	West Mamprusi	1	28	Lactation management, CF, BCC, HIV/AIDs and leadership skills	5	2
	2003	Gushegu Karaga	1	25	BCC, BF, CF	-	3
WVI	2001	Nadowli	3	44	BCC, exclusive BF, CF and formation of MtMSG	4	1
	2002	Nadowli	-	-	-	-	7
		Bongo	-	-	-	-	1
		Gushegu Karaga	1	15	BF, CF	-	-
	2003	Nadowli	1	160	BCC, exclusive BF, CF	50 Formed Father-to-Father Support Group in 10 communities and grannies groups in 3 communities	1
WFP	2002	Saboba Chereponi	1	22	-	5	6
	2003	Saboba Chereponi	-	-	-	5	-
		Jirrapa Lambussie	-	-	-	-	6

NB: Some participants may have attended multiple trainings

APPENDIX F: SURVEY INSTRUMENTS

GHS / LINKAGES FOLLOW-UP SURVEY OF

BREASTFEEDING AND COMPLEMENTARY FEEDING KNOWLEDGE AND BEHAVIORS

FORM 1: MOTHERS OF CHILDREN UNDER 12 MONTHS OF AGE

(Verify that the child is less than 12 months old and continue.
If the child is exactly 12 months or older, thank the mother and discontinue the interview)

SECTION/AREA NAME	Survey form number: ______________________
	District: ______________________
NAME OF LANDLORD/HOUSE:	Village: ______________________
	House number: ______________________
	NGO: ______________________

Name of interviewer: ______________________ Signature______________

Date of final interview………………………………………………

		1	2	2	0	0	3
d	d	m	m	y	y	y	y

Name of Supervisor …………………………………………. Signature …………………………

Date Questionnaire was checked …………………………

		1	2	2	0	0	3
d	d	m	m	y	y	y	y

SECTION 1: BACKGROUND

I WANT TO ASK YOU A FEW QUESTIONS ABOUT YOURSELF AND YOUR YOUNGEST CHILD

No.	Question	Response	
1.	What is your name? (name of mother)		
2.	How old are you?		
3.	What is your youngest child's name? ***(use this name in remaining questions)***		
4.	Date of birth of child	d d m m y y y y	
5.	Date of birth verified using child growth card/available record?	1. Yes	2. No
6.	How old is (name of child)? ***Record age in completed months.***	Months	
7.	Sex of child	1. Boy	2. Girl
8.	Have you ever been to school?	1. Yes	2. No Skip to 10
9.	What is the highest level of school you attended?	1. Arabic (Makaranta) 2. Non-formal 3. Primary 4. Middle/JSS 5. Secondary/SSS 6. Higher 7. Don't know 8. NA (never been to school)	

SECTION 2: FEEDING AND DIARRHOEA HISTORY

NOW I'D LIKE TO ASK YOU SPECIFIC QUESTIONS ABOUT THE THINGS (NAME OF CHILD) EATS OR DRINKS AND HIS/HER HEALTH

10.	Has (name of child) ever been breastfed?			1.Yes 2. No Skip ***to 12***
11.	How long after birth was (name of child) put to the breast? **(Probe activities that occurred between delivery and putting child to the breast)**			1. Less than one hour 2. 1 to 24 hours 3. More than 24 hours 4. Don't remember 5. No response
12.	Before putting (name of child) to the breast for the first time after delivery, was anything offered to him/her to eat or drink apart from your breastmilk?			1. Yes 2. No ***Skip to 14*** 3. Don't know ***Skip to 14***
13.	If yes, what was offered him/her to eat or drink?			1. Plain water or with additives 2. Milk from a wet nurse 3. Other (specify)………………
14.	Are you still breastfeeding (name of child)?			1. Yes 2. No
15.	**Refer to (i), (ii) and (iii) in the right hand column. If child has not started eating, skip 16 and 17ii**	**i) Since this time yesterday, has (name of child) received?**	**ii) If the answer for the past 24 hours is 2. No, ask; Did (name of child) receive this in the past 7 days?**	**iii)** For each group of items from C – O given in the past 24 hours and 7 days ask the age at which she started giving it to (name of child) on a regular basis (at least twice a week). ***Enter 99 if child is not given food/liquid on a regular basis***.
A	Breastmilk	1. Yes 2. No	1. Yes 2. No	
B	Vitamins/Minerals supplements/ hospital medicines	1. Yes 2. No	1. Yes 2. No	
C	Plain water	1. Yes 2. No	1. Yes 2. No	Age in months _________
D	Teas, millet water, fruit juice, sweetened water, herbal teas, etc.	1. Yes 2. No	1. Yes 2. No	Age in months _________
E	Milk (fresh cow milk, tin milk, baby formula)	1. Yes 2. No	1. Yes 2. No	Age in months _________
F	Soya bean milk	1. Yes 2. No	1. Yes 2. No	Age in months _________
G	ORS/Gripe water	1. Yes 2. No	1. Yes 2. No	Age in months _________
H	Other liquids (specify)………………………………	1. Yes 2. No	1. Yes 2. No	Age in months _________
I	Semi solids (koko) ***If response for i and ii are no, skip question 16***	1. Yes 2. No	1. Yes 2. No	Age in months _________
J	Semi solids (tom brown, rice water, weanimix, cerelac)	1. Yes 2. No	1. Yes 2. No	Age in months _________
K	Solids or mushy foods (Fufu,TZ, yam, kenkey, rice, potatoes, petepete, yama etc)	1. Yes 2. No	1. Yes 2. No	Age in months _________
L	Fruits	1. Yes 2. No	1. Yes 2. No	Age in months _________
M	Vegetable stew or soup	1. Yes 2. No	1. Yes 2. No	Age in months _________
N	Meat, fish/amani or eggs	1. Yes 2. No	1. Yes 2. No	Age in months _________
O	Beans, groundnuts, groundnut paste/flour, soya bean flour	1. Yes 2. No	1. Yes 2. No	Age in months _________
P	Other semi-solids, solids (specify)…………………	1. Yes 2. No	1. Yes 2. No	Age in months _________

16.	If the child received koko in the past 24 hours or 7 days, ask was anything added to it? DO NOT PROMPT; ONLY ASK WHAT ELSE? MULTIPLE RESPONSES POSSIBLE		
A	Milk	1. Yes	2. No
B	Groundnut paste/flour	1. Yes	2. No
C	Beans/bean flour	1. Yes	2. No
D	Fish powder	1. Yes	2. No
E	Egg	1. Yes	2. No
F	Oil/shea butter	1. Yes	2. No
G	Dawadawa powder/dozim	1. Yes	2. No
H	Salt	1. Yes	2. No
I	Sugar	1. Yes	2. No
J	Other (specify)..……………………	1. Yes	2. No
K	Nothing added	1. Yes	2. No
17.	**Refer to (i) and (ii) in the right hand column.**	**i.** Can you tell me what foods you think might be rich in vitamin A? ***DO NOT PROMPT; ONLY ASK WHAT ELSE? MULTIPLE RESPONSES POSSIBLE***	**ii.** In the last week, can you tell me about how many days (name of child) ate this? ***ASK THIS QUESTION OF ALL THE FOODS LISTED BELOW***
A	Dark green leafy vegetables	1. Yes 2. No	Days _______
B	Yam/cassava/plantain	1. Yes 2. No	Days _______
C	Pumpkins, carrots	1. Yes 2. No	Days _______
D	Pawpaw, mango	1. Yes 2. No	Days _______
E	Eggs (guinea fowl, or chicken)	1. Yes 2. No	Days _______
F	Fish	1. Yes 2. No	Days _______
G	Liver	1. Yes 2. No	Days _______
H	Palm oil	1. Yes 2. No	Days _______
I	Orange fleshed sweet potato	1. Yes 2. No	Days _______
J	Dawadawa powder/dozim	1. Yes 2. No	Days _______
K	Maize/maize products	1. Yes 2. No	Days _______
L	Other (specify)………………………………………… …………………………..	1. Yes 2. No	Days _______
M	No idea/No response/Don't know	1. Yes 2. No	
18.	Who feeds (name of child) regularly?	1. Mother 2. Other adult caregiver (e.g. Granny, husband, or any adult) 3. Younger caregiver (e.g. older sibling) 4. Nobody 5. No response 6. NA, Has not started eating ***Skip to 22***	
19.	When (name of child) is being offered food, is the food offered before breastmilk or breastmilk is offered before food?	1. Food offered before breastmilk 2. Breastmilk offered before food 3. No particular order 4. Has stopped breastfeeding	

20.	Since this time yesterday, how many times has (name of child) eaten solid/semi solid foods in addition to breastmilk?	1. 1 – 2 times 2. 3 times 3. 4 times 4. 5 times or more 5. Other (specify).............................. 6. Don't know 7. No response 8. NA, Has not started eating	
21.	Apart from koko, is (name of child's) food served separately in his/her own plate/bowl?	1. Yes 2. No, eats with father/mother/older sibling 3. Other (specify)………………… 4. No response 5. Eats nothing apart from koko 6. NA, Has not started eating	
22.	In the past 7 days did (name of child) eat or drink anything from a feeding bottle?	1. Yes	2. No
23.	Has (name of child) had diarrhoea that is, loose or watery stools in the last 2 weeks?	1. Yes	2. No ***Skip to 27***
24.	Did you seek advice or treatment from someone outside of the home for (name of child's) diarrhoea?	1. Yes	2. No ***Skip to 27***
25.	Where did you go for advice or treatment? ***MULTIPLE RESPONSES POSSIBLE***		
A	Health facility/hospital/health centre or post/clinic	1. Yes	2. No
B	Field /community health worker	1. Yes	2. No
C	Chemical shop	1. Yes	2. No
D	Friend/relative	1. Yes	2. No
E	Herbal medicine person	1. Yes	2. No
26.	Who decided that you should go there?	1. Myself 2. Husband/partner 3. Mother-in-law 4. Friends/neighbour 5. Other (specify) ………………………………	
27.	What would you do if (name of child) has diarrhoea? ***DO NOT PROMPT; ONLY ASK WHAT ELSE? MULTIPLE RESPONSES POSSIBLE***		
A	Initiate fluids	1. Yes	2. No
B	Give the child more to drink	1. Yes	2. No
C	Feed the child frequently	1. Yes	2. No
D	Give the child ORS/ORT	1. Yes	2. No
E	Withhold fluids	1. Yes	2. No
F	Withhold foods	1. Yes	2. No
G	Send child to a health facility	1. Yes	2. No
H	Buy drugs for the child	1. Yes	2. No
I	Don't know	1. Yes	2. No
J	No response	1. Yes	2. No
K	Other (specify)………………………….	1. Yes	2. No
L	Do nothing	1. Yes	2. No
28.	What should be done to prevent a child from getting diarrhoea? ***DO NOT PROMPT; ONLY ASK WHAT ELSE? MULTIPLE RESPONSES POSSIBLE***		
A	Wash hands with soap before food preparation	1. Yes	2. No
B	Wash child's' hands with soap before and after feeding	1. Yes	2. No
C	Wash hands with soap after attending to a child who has defecated.	1. Yes	2. No
D	Cover foods and drinking water	1. Yes	2. No
E	Heat cold foods before eating	1. Yes	2. No
F	Exclusively breastfeed/ don't give water for first 6 months	1. Yes	2. No
G	Wash with water only	1. Yes	2. No
H	Don't know	1. Yes	2. No
I	No response	1. Yes	2. No
J	Other (specify)………………………….	1. Yes	2. No

SECTION 3: RECALL OF RADIO MESSAGES

I WANT TO ASK YOU SOME QUESTIONS ON RADIO

29.	***Do you listen to the radio?***	1. Yes 2. No ***Skip to 32***	
30.	Have you heard anything on breastfeeding or child feeding on the radio?	1. Yes 2. No ***Skip to 32***	
31.	What did you hear? ***DO NOT PROMPT; ONLY ASK WHAT ELSE? MULTIPLE RESPONSES POSSIBLE***		
A	Put the newborn to the breast immediately after birth/before bathing	1. Yes	2. No
B	Give colostrum (yellow breastmilk)	1. Yes	2. No
C	Give only breastmilk for the first six months of life	1. Yes	2. No
D	Empty one breast at a feed before offering the other	1. Yes	2. No
E	Proper positioning and attachment to the breast	1. Yes	2. No
F	Continue breastfeeding till child is 2 years or more	1. Yes	2. No
G	Start foods in addition to breastmilk at 6 months	1. Yes	2. No
H	Types of foods to feed young children in addition to breastmilk	1. Yes	2. No
I	How to feed young children e.g. frequency, amount, density	1. Yes	2. No
J	Older mothers/mother's-in-law and husbands to help make child feeding easier	1. Yes	2. No
K	Support groups/clubs to help mothers better feed their children	1. Yes	2. No
L	Other (specify)…………………………………………………	1. Yes	2. No
M	Don't remember	1. Yes	2. No
N	No response	1. Yes	2. No

SECTION 4: RECOGNITION OF MESSAGES

NOW I WANT TO ASK YOU QUESTIONS ABOUT INFANT FEEDING IN GENERAL

32.	When should the newborn be put to the breast after birth?	1. Immediately after delivery 2. After mother/child have bathed 3. After mother/child have bathed and rested 4. A day or more after delivery 5. When breastmilk comes in 6. Other (specify)……………………………. 7. Don't know 8. No response	
33.	What should a woman who has just delivered do with the first yellow breastmilk?	1. Give it to the baby 2. Discard/spill it 3. Other (specify)…………………………….. 4. Don't know 5. No response	
34.	How long should a woman feed her baby ONLY breastmilk, without giving water or other liquids or foods?	1. Until 6 months 2. Less than 6 months… 3. More than 6 months 4. Until the baby shows signs of wanting other liquid or food 5. Other (specify) ……………………………. 6. Don't know 7. No response	
35.	When a baby is breastfeeding, at what time should the second breast be given? ***DO NOT PROMPT; ONLY ASK WHAT ELSE? MULTIPLE RESPONSES POSSIBLE***		
A	When breast becomes soft/empty/light/child is not full	1. Yes	2. No
B	Child comes off breast himself/herself	1. Yes	2. No
C	Both breasts should be given at a feed	1. Yes	2. No
D	When milk from the other breast begins to flow	1. Yes	2. No
E	The same breast should be offered all the time	1. Yes	2. No
F	Other (specify)…..……………………………………	1. Yes	2. No
G	Don't know	1. Yes	2. No
H	No response	1. Yes	2. No

36.	What can a woman do to have more breastmilk? ***DO NOT PROMPT; ONLY ASK WHAT ELSE? MULTIPLE RESPONSES POSSIBLE***		
A	Increase frequency of child suckling	1. Yes	2. No
B	Have no worry	1. Yes	2. No
C	Eat special foods/soup/drink	1. Yes	2. No
D	Increase quantity of food/liquids	1. Yes	2. No
E	Massage breasts	1. Yes	2. No
F	Other (specify)………………………………	1. Yes	2. No
G	Don't know	1. Yes	2. No
H	No response	1. Yes	2. No

37.	At what age should a woman start to give other foods (semi-solids, liquids) in addition to breastmilk to her child?	1. At 6 months 2. Less than 6 months 3. More than 6 months 4. When child shows signs of wanting food 5. Other (specify) …………………….. 6. Don't know 7. No response

38.	Since you gave birth to (name of child), has anybody made breastfeeding or child feeding easier for you?	1.Yes	2. No **Skip to 41**

39.	Who made breastfeeding or child feeding easier for you? ***Probe on who does it most***	1. Mother/mother in-law 2. Husband 3. Rival 4. Other family member 5. Neighbour 6. Friend 7. Other (specify)………………………..

40.	What help did he/she offer? ***DO NOT PROMPT; ONLY ASK WHAT ELSE? MULTIPLE RESPONSES POSSIBLE***		
A	Reduced my workload in household chores (cooking, washing, bathing children, fetching water, childcare)	1.Yes	2. No
B	Reduced my workload on the farm	1.Yes	2. No
C	Offered me more/different types of foods	1.Yes	2. No
D	Encouraged me to put my newborn to breast immediately after birth/ before bathing	1.Yes	2. No
E	Encouraged me to give only breastmilk for the first six months	1.Yes	2. No
F	Encouraged me to empty one breast before offering the other	1.Yes	2. No
G	Encouraged me to hold the child well during breastfeeding	1.Yes	2. No
H	Encouraged me to start giving soft/ mushy foods in addition to breastmilk at 6 months	1.Yes	2. No
I	Encouraged me to give my baby fruits, vegetables, fruit juice	1.Yes	2. No
J	Encouraged me to add extra foods such as beans, groundnut, fish, eggs to the child's food	1.Yes	2. No
K	Encouraged me to feed the child regularly/when it cries	1.Yes	2. No
L	Ensured that there is enough food such as beans and groundnut for the family	1.Yes	2. No
M	Other (specify)…………………………………………………………………	1.Yes	2. No
N	Don't remember	1.Yes	2. No
O	No response	1.Yes	2. No
41.	Has anybody ever talked to you about breastfeeding or child feeding showing a card like this? ***SHOW A SAMPLE OF LINKAGES CARD***	1.Yes	2. No

42.	Where, how or from whom do you hear about breastfeeding or child feeding? ***DO NOT PROMPT. ONLY ASK WHO OR WHERE ELSE? MULTIPLE RESPONSES POSSIBLE***		
A	Older women	1.Yes	2. No
B	Rival	1.Yes	2. No
C	Husband	1.Yes	2. No
D	Father-in-law	1.Yes	2. No
E	Other family member	1.Yes	2. No
F	Neighbour /friend	1.Yes	2. No
G	Mother-to-mother support group/club	1.Yes	2. No
H	Durbar / meeting	1.Yes	2. No
I	Tradition/custom	1.Yes	2. No
J	Radio	1.Yes	2. No
K	TBA	1.Yes	2. No
L	Community volunteer	1.Yes	2. No
M	Church/pastor/ Mosque/Imam	1.Yes	2. No
N	Health worker	1.Yes	2. No
O	Traditional healer	1.Yes	2. No
P	Other source (specify)………………….	1.Yes	2. No
Q	Self/own experience	1.Yes	2. No
R	Don't know	1.Yes	2. No
S	No response	1.Yes	2. No

SECTION 5: KNOWLEDGE OF BREASTFEEDING PROBLEMS AND THEIR MANAGEMENT

NOW I WOULD LIKE TO ASK ABOUT BREASTFEEDING PROBLEMS AND HOW THEY COULD BE MANAGED

43.	Do you know about sore nipples?	1.Yes	2. No ***Skip to 45***
44.	How should it be managed? ***DO NOT PROMPT. ONLY ASK WHAT ELSE? MULTIPLE RESPONSES POSSIBLE***		
A	Apply a drop of the last/hind breastmilk and allow to dry	1.Yes	2. No
B	Apply shea butter	1.Yes	2. No
C	Apply gentian violet	1.Yes	2. No
D	Apply herbs	1.Yes	2. No
E	Visit a hospital/clinic	1.Yes	2. No
F	Allow child to feed from sore breast	1.Yes	2. No
G	Stop child from feeding on sore breast	1.Yes	2. No
H	Other (specify)……………………………………………………………… ….	1.Yes	2. No
I	Do nothing	1.Yes	2. No
J	Don't know	1.Yes	2. No
K	No response	1.Yes	2. No
45.	Do you know about breast engorgement?	1.Yes	2. No ***Skip 46***
46.	How should it be managed? ***DO NOT PROMPT. ONLY ASK WHAT ELSE? MULTIPLE RESPONSES POSSIBLE***		
A	Express milk	1.Yes	2. No
B	Lower breast into warm water in a mortar	1.Yes	2. No
C	Allow child to feed on engorged breast	1.Yes	2. No
D	Apply a warm bottle	1.Yes	2. No
E	Apply shea butter	1.Yes	2. No
F	Apply herbs	1.Yes	2. No
G	Stop child from feeding on engorged breast	1.Yes	2. No
H	Visit a hospital/clinic	1.Yes	2. No
J	Other (specify)……………………………………………………………	1.Yes	2. No
K	Do nothing	1.Yes	2. No
L	Don't know	1.Yes	2. No
M	No response	1.Yes	2. No

Notes: Please record any observations you made during the interview in this space.

(CHECK THE QUESTIONNAIRE TO MAKE SURE THAT ALL RESPONSES HAVE BEEN PROVIDED AND CODED)

Thank you very much for your time and for helping us as we try to make health better. Do you have any questions for me?

GHS/ LINKAGES FOLLOW-UP SURVEY OF

BREASTFEEDING AND COMPLEMENTARY FEEDING KNOWLEDGE AND BEHAVIORS

FORM 2: HUSBANDS

SECTION/AREA NAME	Survey form number: ______________________
	District: ______________________
NAME OF LANDLORD/HOUSE:	Village: ______________________
	House number: ______________________
	NGO: ______________________

Name of interviewer: ______________________ Signature ______________________

Date of final interview……………………………………………………………

		1	2	2	0	0	3
d	d	m	m	y	y	y	y

Name of Supervisor ……………………………………………. Signature ………………………….

Date Questionnaire was checked …………………………………………

		1	2	2	0	0	3
d	d	m	m	y	y	y	y

SECTION 1: BACKGROUND AND RECALL OF RADIO MESSAGES

I WANT TO ASK YOU A FEW QUESTIONS ABOUT YOURSELF AND WHAT YOU HEAR ON RADIO

1.	What is your name?	
2.	Have you ever been to school?	1. Yes 2. No Skip to 4
3.	What is the highest level of school you attended?	9. Arabic 10. Non-formal 11. Primary 12. Middle/JSS 13. Secondary/SSS 14. Higher 15. Don't know 16. NA (never being to school)
4.	Do you listen to the radio?	1. Yes 2. No ***Skip to 7***
5.	Have you heard anything on breastfeeding or child feeding on the radio?	3. Yes 4. No ***Skip to 7***

6	What did you hear? ***DO NOT PROMPT; ONLY ASK WHAT ELSE? MULTIPLE RESPONSES POSSIBLE***		
A	Put the newborn to the breast immediately after birth/before bathing	1. Yes	2. No
B	Give colostrum (yellow breastmilk)	1. Yes	2. No
C	Give only breastmilk for the first six months of life	1. Yes	2. No
D	Empty one breast at a feed before offering the other	1. Yes	2. No
E	Proper positioning and attachment to the breast	1. Yes	2. No
F	Continue breastfeeding till child is 2 years or more	1. Yes	2. No
G	Start foods in addition to breastmilk at 6 months	1. Yes	2. No
H	Types of foods to feed young children in addition to breastmilk	1. Yes	2. No
I	How to feed young children e.g. frequency, amount, density	1. Yes	2. No
J	Older mothers/mother's-in-law and husbands to help make child feeding easier	1. Yes	2. No
K	Support groups/clubs to help mothers better feed their children	1. Yes	2. No
L	Other (specify)……………………………………………………	1. Yes	2. No
M	Don't remember	1. Yes	2. No
N	No response	1. Yes	2. No

SECTION 2: RECOGNITION OF MESSAGES

NOW I WANT TO ASK YOU QUESTIONS ABOUT INFANT FEEDING IN GENERAL

7.	When should the newborn be put to the breast after birth?	9. Immediately after delivery 10. After mother/child have bathed 11. After mother/child have bathed and rested 12. A day or more after delivery 13. When breastmilk comes in 14. Other (specify)………………………. 15. Don't know *4.* No response
8.	What should a woman who has just delivered do with the first yellow breastmilk?	6. Give it to the baby 7. Discard/spill it 8. Other (specify)…………………………….. 9. Don't know 10. No response
9.	How long should a woman feed her baby ONLY breastmilk, without giving water or other liquids or foods?	1. Until 6 months 2. Less than 6 months 3. More than 6 months 4. Until the baby shows signs of wanting them 5. Other 6. Don't know 7. No response

10.	When a baby is breastfeeding, at what time should the second breast be given? **MULTIPLE RESPONSES POSSIBLE**		
A	When breast becomes soft/empty/light/ child is not full	1. Yes	2. No
B	Child comes off breast himself/herself	1. Yes	2. No
C	Both breasts should be given at a feed	1. Yes	2. No
D	When milk from the other breast begins to flow	1. Yes	2. No
E	The same breast should be offered all the time	1. Yes	2. No
F	Other (specify)…..……………………………………	1. Yes	2. No
G	Don't know	1. Yes	2. No
H	No response	1. Yes	2. No
11.	What can a woman do to have more breastmilk? **MULTIPLE RESPONSES POSSIBLE**		
A	Increase frequency of child suckling	1. Yes	2. No
B	Have no worry	1. Yes	2. No
C	Eat special foods/soup/drink	1. Yes	2. No
D	Increase quantity of food/liquids	1. Yes	2. No
E	Massage breasts	1. Yes	2. No
F	Other (specify)………………………………	1. Yes	2. No
G	Don't know	1. Yes	2. No
H	No response	1. Yes	2. No

12.	At what age should a woman start to give other foods (semi-solids, liquids) in addition to breastmilk to her child?	8. At 6 months 9. Less than 6 months 10. More than 6 months 11. When child shows signs of wanting food 12. Don't know 13. No response	
13.	What should a mother add to a child's koko? ***DO NOT PROMPT; ONLY ASK WHAT ELSE? MULTIPLE RESPONSES POSSIBLE***		
A	Milk	1. Yes	2. No
B	Groundnut paste/flour	1. Yes	2. No
C	Beans/bean flour	1. Yes	2. No
D	Fish/fish powder	1. Yes	2. No
E	Egg or yolk	1. Yes	2. No
F	Dawadawa powder/dozim	1. Yes	2. No
G	Oil/shea butter	1. Yes	2. No
H	Salt	1. Yes	2. No
I	Sugar	1. Yes	2. No
J	Other (specify)…………………	1. Yes	2. No
K	Nothing	1. Yes	2. No
L	Don't know	1. Yes	2. No
M	No response	1. Yes	2. No
14.	How many times a day should a baby of the following ages eat in addition to breastmilk?:		
A	A child from 6 - 8 months	1. 1 - 2 times 2. 3 times or more 3. As many times as the child wants 4. Other (specify).............................. 5. Don't know 6. No response	
B	A child from 9 – 11 months	1. 1 – 2 times 2. 3 times 3. 4 times or more 4. As many times as the child wants 5. Other (specify)................................. 6. Don't know 7. No response	
C	A child 1 year and over	9. 1 – 2 times 10. 3 - 4 times 11. 5 times or more 12. As many times as the child wants 13. Other (specify)................................. 14. Don't know 15. No response	

15.	Refer to i and ii. **Proceed to ii only where the response for i) is yes** **DO NOT PROMPT**	i) What can a husband do to make breastfeeding or child feeding easier for a breastfeeding mother?		ii) Which of these have you been able to do?		
A	Reduce her workload in household chores (cooking, washing, bathing children, fetching water, childcare)	1.Yes	2. No	1.Yes	2. No	3. NA
B	Reduce her workload on the farm	1.Yes	2. No	1.Yes	2. No	3. NA
C	Offer her more/different types of foods	1.Yes	2. No	1.Yes	2. No	3. NA
D	Encourage her to put the newborn to breast immediately after birth/ before bathing	1.Yes	2. No	1.Yes	2. No	3. NA
E	Encourage her to give only breastmilk for the first six months	1.Yes	2. No	1.Yes	2. No	3. NA
F	Encourage her to empty one breast before offering the other	1.Yes	2. No	1.Yes	2. No	3. NA
G	Encourage her to hold the child well during breastfeeding	1.Yes	2. No	1.Yes	2. No	3. NA
H	Encourage her to start giving soft/ mushy foods in addition to breastmilk at 6 months	1.Yes	2. No	1.Yes	2. No	3. NA
I	Encourage her to add extra foods such as beans, groundnut, fish, eggs to the child's food	1.Yes	2. No	1.Yes	2. No	3. NA
J	Encourage her to give the baby fruits, vegetables, fruit juice	1.Yes	2. No	1.Yes	2. No	3. NA
K	Encourage her to feed the child regularly/when it cries	1.Yes	2. No	1.Yes	2. No	3. NA
L	Ensured that there is enough foods such as beans and groundnut for the family	1.Yes	2. No	1.Yes	2. No	3. NA
M	Other (specify)………………………………………………	1.Yes	2. No	1.Yes	2. No	3. NA
N	Nothing	1.Yes	2. No			
O	Don't remember	1.Yes	2. No			
P	Don't know	1.Yes	2. No			
Q	No response	1.Yes	2. No			

16.	**Has anybody ever talked to you about breastfeeding or child feeding showing a card like this?** ***SHOW A SAMPLE OF LINKAGES CARD***	1. Yes	2. No

17.	Where, how or from whom do you hear about breastfeeding or child feeding? ***DO NOT PROMPT; ONLY ASK WHAT ELSE? MULTIPLE RESPONSES POSSIBLE***		
A	Daughter/daughter-in-law	1.Yes	2. No
B	Son	1.Yes	2. No
C	Husband	1.Yes	2. No
D	Other family member	1.Yes	2. No
E	Neighbour /friend	1.Yes	2. No
F	Mother-to-mother support group	1.Yes	2. No
G	Durbar/meeting	1.Yes	2. No
H	Tradition/custom	1.Yes	2. No
I	Radio	1.Yes	2. No
J	TBA	1.Yes	2. No
K	Community volunteer	1.Yes	2. No
L	Church/pastor/Mosque/Imam	1.Yes	2. No
M	Health worker	1.Yes	2. No
N	Traditional healer	1.Yes	2. No
O	Other source (specify)…………………………….	1.Yes	2. No
P	Self/own experience	1.Yes	2. No
Q	Don't know	1.Yes	2. No
R	No response	1.Yes	2. No

Notes: Please record any observations you made during the interview in this space.

(CHECK THE QUESTIONNAIRE TO MAKE SURE THAT ALL RESPONSES HAVE BEEN PROVIDED AND CODED)

Thank you very much for your time and for helping us as we try to make health better. Do you have any questions for me?

GHS/ LINKAGES FOLLOW-UP SURVEY OF BREASTFEEDING AND COMPLEMENTARY FEEDING KNOWLEDGE AND BEHAVIORS

FORM 3: OLDER MOTHERS/MOTHERS-IN-LAW

SECTION/AREA NAME NAME OF LANDLORD/HOUSE:	Survey form number: ______________________ District: ________________________________ Village: ________________________________ House number: ___________________________ NGO: __________________________________

Name of interviewer: ________________________________ Signature ______________________

Date of final interview………………………………………………………

		1	2	2	0	0	3
d	d	m	m	y	y	y	y

Name of Supervisor ……………………………………………. Signature ………………………….

Date Questionnaire was checked …………………………………………

		1	2	2	0	0	3
d	d	m	m	y	y	y	y

SECTION 1: BACKGROUND AND RECALL OF RADIO MESSAGES

I WANT TO ASK YOU A FEW QUESTIONS ABOUT YOURSELF AND WHAT YOU HEAR ON RADIO

3.	What is your name?	
4.	Have you ever been to school?	1. Yes 2. No Skip to 4
6.	What is the highest level of school you attended?	17. Arabic 18. Non-formal 19. Primary 20. Middle/JSS 21. Secondary/SSS 22. Higher 23. Don't know 24. NA (never being to school)
7.	**Do you listen to the radio?**	3. Yes 4. No ***Skip to 7***
8.	Have you heard anything on breastfeeding or child feeding on the radio?	5. Yes 6. No ***Skip to 7***

6	What did you hear? ***DO NOT PROMPT; ONLY ASK WHAT ELSE? MULTIPLE RESPONSES POSSIBLE***		
A	Put the newborn to the breast immediately after birth/before bathing	1. Yes	2. No
B	Give colostrum (yellow breastmilk)	1. Yes	2. No
C	Give only breastmilk for the first six months of life	1. Yes	2. No
D	Empty one breast at a feed before offering the other	1. Yes	2. No
E	Proper positioning and attachment to the breast	1. Yes	2. No
F	Continue breastfeeding till child is 2 years or more	1. Yes	2. No
G	Start foods in addition to breastmilk at 6 months	1. Yes	2. No
H	Types of foods to feed young children in addition to breastmilk	1. Yes	2. No
I	How to feed young children e.g. frequency, amount, density	1. Yes	2. No
J	Older mothers/mother's-in-law and husbands to help make child feeding easier	1. Yes	2. No
K	Support groups/clubs to help mothers better feed their children	1. Yes	2. No
L	Other (specify)……………………………………………………	1. Yes	2. No
M	Don't remember	1. Yes	2. No
N	No response	1. Yes	2. No

SECTION 2: RECOGNITION OF MESSAGES

NOW I WANT TO ASK YOU QUESTIONS ABOUT INFANT FEEDING IN GENERAL

18.	When should the newborn be put to the breast after birth?	16. Immediately after delivery 17. After mother/child have bathed 18. After mother/child have bathed and rested 19. A day or more after delivery 20. When breastmilk comes in 21. Other (specify)………………………. 22. Don't know *23.* No response
19.	What should a woman who has just delivered do with the first yellow breastmilk?	11. Give it to the baby 12. Discard/spill it 13. Other (specify)…………………………….. 14. Don't know 15. No response
20.	How long should a woman feed her baby ONLY breastmilk, without giving water or other liquids or foods?	8. Until 6 months 9. Less than 6 months 10. More than 6 months 11. Until the baby shows signs of wanting them 12. Other 13. Don't know 14. No response

21.	When a baby is breastfeeding, at what time should the second breast be given? **MULTIPLE RESPONSES POSSIBLE**		
A	When breast becomes soft/empty/light/ child is not full	1. Yes	2. No
B	Child comes off breast himself/herself	1. Yes	2. No
C	Both breasts should be given at a feed	1. Yes	2. No
D	When milk from the other breast begins to flow	1. Yes	2. No
E	The same breast should be offered all the time	1. Yes	2. No
F	Other (specify)…..……………………………………	1. Yes	2. No
G	Don't know	1. Yes	2. No
H	No response	1. Yes	2. No
22.	What can a woman do to have more breastmilk? **MULTIPLE RESPONSES POSSIBLE**		
A	Increase frequency of child suckling	1. Yes	2. No
B	Have no worry	1. Yes	2. No
C	Eat special foods/soup/drink	1. Yes	2. No
D	Increase quantity of food/liquids	1. Yes	2. No
E	Massage breasts	1. Yes	2. No
F	Other (specify)………………………………	1. Yes	2. No
G	Don't know	1. Yes	2. No
H	No response	1. Yes	2. No

23.	At what age should a woman start to give other foods (semi-solids, liquids) in addition to breastmilk to her child?	14. At 6 months 15. Less than 6 months 16. More than 6 months 17. When child shows signs of wanting food 18. Don't know 19. No response	
24.	What should a mother add to a child's koko? ***DO NOT PROMPT; ONLY ASK WHAT ELSE? MULTIPLE RESPONSES POSSIBLE***		
A	Milk	1. Yes	2. No
B	Groundnut paste/flour	1. Yes	2. No
C	Beans/bean flour	1. Yes	2. No
D	Fish/fish powder	1. Yes	2. No
E	Egg or yolk	1. Yes	2. No
F	Dawadawa powder/dozim	1. Yes	2. No
G	Oil/shea butter	1. Yes	2. No
H	Salt	1. Yes	2. No
I	Sugar	1. Yes	2. No
J	Other (specify)…………………	1. Yes	2. No
K	Nothing	1. Yes	2. No
L	Don't know	1. Yes	2. No
M	No response	1. Yes	2. No
25.	How many times a day should a baby of the following ages eat in addition to breastmilk?:		
A	A child from 6 - 8 months	7. 1 - 2 times 8. 3 times or more 9. As many times as the child wants 10. Other (specify).............................. 11. Don't know 12. No response	
B	A child from 9 – 11 months	8. 1 – 2 times 9. 3 times 10. 4 times or more 11. As many times as the child wants 12. Other (specify)................................. 13. Don't know 14. No response	
C	A child 1 year and over	16. 1 – 2 times 17. 3 - 4 times 18. 5 times or more 19. As many times as the child wants 20. Other (specify)................................. 21. Don't know 22. No response	

26.	Refer to i and ii. **Proceed to ii only where the response for i) is yes** **DO NOT PROMPT**	i) What can an older woman do to make breastfeeding or child feeding easier for a breastfeeding mother?		ii) Which of these have you been able to do?		
A	Reduce her workload in household chores (cooking, washing, bathing children, fetching water, childcare)	1.Yes	2. No	1.Yes	2. No	3. NA
B	Reduce her workload on the farm	1.Yes	2. No	1.Yes	2. No	3. NA
C	Offer her more/different types of foods	1.Yes	2. No	1.Yes	2. No	3. NA
D	Encourage her to put the newborn to breast immediately after birth/ before bathing	1.Yes	2. No	1.Yes	2. No	3. NA
E	Encourage her to give only breastmilk for the first six months	1.Yes	2. No	1.Yes	2. No	3. NA
F	Encourage her to empty one breast before offering the other	1.Yes	2. No	1.Yes	2. No	3. NA
G	Encourage her to hold the child well during breastfeeding	1.Yes	2. No	1.Yes	2. No	3. NA
H	Encourage her to start giving soft/ mushy foods in addition to breastmilk at 6 months	1.Yes	2. No	1.Yes	2. No	3. NA
I	Encourage her to add extra foods such as beans, groundnut, fish, eggs to the child's food	1.Yes	2. No	1.Yes	2. No	3. NA
J	Encourage her to give the baby fruits, vegetables, fruit juice	1.Yes	2. No	1.Yes	2. No	3. NA
K	Encourage her to feed the child regularly/when it cries	1.Yes	2. No	1.Yes	2. No	3. NA
L	Other (specify)………………………………………………	1.Yes	2. No	1.Yes	2. No	3. NA
M	Nothing	1.Yes	2. No			
N	Don't remember	1.Yes	2. No			
O	Don't know	1.Yes	2. No			
P	No response	1.Yes	2. No			

27.	**Has anybody ever talked to you about breastfeeding or child feeding showing a card like this**? ***SHOW A SAMPLE OF LINKAGES CARD***	3. Yes	4. No
28.	Where, how or from whom do you hear about breastfeeding or child feeding? ***DO NOT PROMPT; ONLY ASK WHAT ELSE? MULTIPLE RESPONSES POSSIBLE***		
A	Daughter/daughter-in-law	1.Yes	2. No
B	Son	1.Yes	2. No
C	Husband	1.Yes	2. No
D	Other family member	1.Yes	2. No
E	Neighbour /friend	1.Yes	2. No
F	Mother-to-mother support group	1.Yes	2. No
G	Durbar/meeting	1.Yes	2. No
H	Tradition/custom	1.Yes	2. No
I	Radio	1.Yes	2. No
J	TBA	1.Yes	2. No
K	Community volunteer	1.Yes	2. No
L	Church/pastor/Mosque/Imam	1.Yes	2. No
M	Health worker	1.Yes	2. No
N	Traditional healer	1.Yes	2. No
O	Other source (specify)…………………………….	1.Yes	2. No
P	Self/own experience	1.Yes	2. No
Q	Don't know	1.Yes	2. No
R	No response	1.Yes	2. No

Notes: Please record any observations you made during the interview in this space.

(CHECK THE QUESTIONNAIRE TO MAKE SURE THAT ALL RESPONSES HAVE BEEN PROVIDED AND CODED)

Thank you very much for your time and for helping us as we try to make health better. Do you have any questions for me?