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**QUALITATIVE RESEARCH  
ON INFANT FEEDING  
IN OYO AND OSUN STATES, NIGERIA**

Centre for Health, Population, and Nutrition  
(CHEPON)

for

Wellstart International's Expanded Promotion of Breastfeeding Program

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## ACRONYMS AND TERMS

### ACRONYMS

BMC -	Ogbomoso Baptist Medical Centre
CBD -	Community Based Distribution Agent
CHEW -	Community Health Extension Worker
EB -	exclusive breastfeeding
EDI -	extended depth interview
EPB -	Wellstart International's Expanded Promotion of Breastfeeding
FGD -	focus group discussion
IEC -	information, education and communication
IUCD -	Intrauterine Contraceptive Device
LAM -	lactational amenorrhea method (of family planning)
TBA -	Traditional Birth Attendant
VHW -	Village Health Worker

### TERMS

agbo -	a traditional herbal concoction fed to babies
agbo jedijedi -	a type of agbo for the prevention of haemorrhoids
ahomada -	a native soap
akara -	fried bean cake or cowpea fritters
alajapa -	long-distance traveller/trader
amala -	yam flour meal eaten with stew
eba -	fried grated cassava meal ( <i>garri meal</i> ) eaten with stew
egbogi -	a traditional medicine
egusi -	melon seed
eko -	solid pap



ewedu soup -	minced vegetable ( <i>Corchorus olithorus</i> ) stew/sauce
gbegiri -	bean soup
ile tutu -	convulsion
kulikuli -	defatted fried groundnut cake
malafo -	a native soap
moinmoin -	steamed bean cake
mosa -	fried overripe plantain cake
ogi -	cereal pap (maize, sorghum, millet, etc.)
oka ori -	widening anterior fontanelle
ome iye -	holy water
tuo -	maize of rice flour meal eaten with stew



## INTRODUCTION

Wellstart International's Expanded Promotion of Breastfeeding (EPB) Program planned and funded formative research on beliefs and attitudes related to infant feeding practices in Nigeria to guide the development of program and communication strategies. To assist in focusing this formative research, a thorough review of the literature on breastfeeding and other child feeding practices was undertaken. A summary of this review's findings and recommendations for formative research are found in Annex I.

The formative research conducted in Oyo and Osun States was intended to focus on key issues that need to be addressed in planning activities supported by Wellstart EPB. The objectives of the research were to:

- ◆ Improve our understanding of mothers' and other family members' beliefs about infant feeding, their reasons for current practices related to child nutrition, and the constraints to changing behavior;
- ◆ Investigate the current beliefs on infant feeding of various community-based health workers who may be involved in implementation of EPB activities, and to assess their motivations and constraints for providing counseling on infant feeding;
- ◆ Test, at the household level, the acceptability and feasibility of potential recommendations for improving young child feeding; and,
- ◆ Gather information to guide the development of effective program communications and community interventions to improve feeding practices and child nutritional status.

The three main components of the research were:

- ◆ Focus group discussions (FGDs) with mothers and other family members who influence child feeding;
- ◆ Interviews with community-based health workers; and,
- ◆ A set of "household action trials" consisting of (1) in-depth interviews to identify feeding problems, (2) provision of counseling to motivate mothers to try improved practices, and (3) follow-up interviews to learn about their responses and opinions on the acceptability of the recommended behaviors.

The findings from these three components are discussed separately in this report. The following table provides an overview of the research methods and objectives.

**Table 1: Overview of Key Topics, Participants and Methods**

<b>Method</b>	<b>Participants</b>	<b>General Topics</b>
FGDs, using projective techniques (responding to pictures, etc.)	Mothers of children < 2 years	Images of breast and bottle feeding Perceived advantages and disadvantages Concepts of child health, development and feeding; Aspirations for the child Attitudes toward Village Health Workers (VHWs)/Community Based Distribution Agents (CBDs) Sources of guidance on infant feeding
FGDs	Grandmothers of children < 2 years	Modern and traditional child feeding; constraints to changing practices Concepts/relationship of child health, development, and feeding practices Perceived role/influence of grandmother
FGDs	Fathers of children < 2 years	Role of fathers in infant feeding Images of breast and bottle feeding Perceived advantages and disadvantages
Interviews	Program implementors [VHWs, Traditional Birth Attendants (TBAs), CBDs]	Knowledge of appropriate infant feeding Understanding of how to communicate with mothers/counseling skills Motivations and constraints for providing information on infant feeding and motivating behavior change in the community
In-depth Interviews and Household Action Trials	Mothers of children aged 0-24 months (see additional criteria and more specific age groups)	Willingness to try infant feeding practices (exclusive breastfeeding, fortification of pap, increased frequency/amount of breastmilk or foods, introduction of solid foods, etc.) Response to trials/perceived outcome Motivations and constraints for adoption of recommended feeding practices



## **PART 1: FOCUS GROUP DISCUSSIONS**

### **I. INTRODUCTION**

Focus group discussions (FGDs) constituted the first methodology used in the project's assessment phase. The investigation of infant feeding (particularly breastfeeding) practices covered both rural and urban settings. Mothers with young infants (less than 2 years old) were the main focus of this study, although fathers and grandmothers were also included to determine their ideas regarding infant feeding and their roles in influencing feeding decisions.

The study was conducted in Oyo and Osun states in the Western Zone of Nigeria. Ogbomoso (and its environs) in Oyo State was selected as the rural setting. The Ogbomoso Baptist Medical Centre (BMC) outreach programme is very active in this region. Osogbo in Osun State was selected to represent an urbanized area of a typical Western zone city in the country.

Initially, four groups of mothers, four groups of fathers, and four groups of grandmothers in five communities participated in the focus group discussions. A total of 12 FGDs were conducted.

Because the preliminary results from this study showed that the BMC outreach programme in Ogbomoso had made a tremendous impact on the three rural communities initially used for this study, it was necessary to conduct two additional FGDs on infant feeding practices in two rural communities within the geographical area covered by the BMC programme but not yet involved in the programme. These communities, Oloya and Tewure, were selected by Wellstart's Resident Advisor and the Director of Community Health and General Practice Training Programmes of the BMC, Ogbomoso.

Mothers of infants aged 0-24 months participated in the discussions. Eight mothers participated in Oloya village, while nine mothers participated in Tewure village. They were predominantly farmers.

### **II. RESEARCH OBJECTIVES AND METHODOLOGY**

#### **Objectives**

The objectives of the research were to:

- ◆ Improve our understanding of mothers and other family members' beliefs about infant feeding, their reasons for current practices related to child nutrition, and the constraints to changing behavior; and,
- ◆ Gather information that could guide the development of an effective Information, Education and Communication (IEC) component of community interventions to improve feeding practices and child nutrition status.

#### **Training of the Interviewers**

The research team was trained for four days to: (1) recruit focus group participants; (2) conduct the discussions (moderating); (3) probe on the themes to be included in the sessions; (4) take notes; and



(5) analyze the information obtained on practices. Moderators participated in a series of simulated focus group discussions that anticipated the situations likely to be encountered in the field.

### Selection of Study Sample

Three rural communities (Lekewogbe, Ijuju and Ladokun) were selected in Ogbomoso with the assistance of the Director of Community Health and General Practice Training Programmes of the BMC, Ogbomoso, while two urban locations (Ayetoro and Esa Abinuyo) were selected in Osogbo with the assistance of the Coordinator of the state's chapter of the National Council for Women Societies.

The researchers, with the help of the contact persons and their teams, recruited the discussants. The discussants were from low-income households. The following categories of people were recruited:

- mothers of infants less than 2 years old;
- fathers of infants less than 2 years old; and,
- grandmothers who were the principal caretakers of infants less than 2 years old.

Table 2A and 2B shows the selected locations, composition of the discussion groups and the participants' predominant occupations in Ogbomoso and Osogbo, respectively.

**Table 2A: The Characteristics of the Communities and of the Different Groups  
Ogbomoso Area**

Location	Discussion Group Composition	No. of Participants	Predominant Occupation	Date of Discussion	Comment
Ladokun	Mothers	6	Farmers	2:5:95	Rural
	Grandmothers	6	Farmers	3:5:95	
Ijuju	Mothers	8	Farmers	3:5:95	Rural close to Ogbomoso town
	Fathers	6	Farmers	2:5:95	
Lekewogbe	Fathers	8	Farmers	9:5:95	Rural
	Grandmothers	6	Farmers	9:5:95	
Olaya	Mothers	8	Farmers	17:5:95	Rural
Tewure	Mothers	9	Farmers	17:5:95	Rural



**Table 2B: The Characteristics of the Communities and of the Different Groups  
Osogbo Area**

Location	Discussion Group Composition	No. of Participants	Predominant Occupation	Date of Discussion	Comment
Ayetoro	Mothers	6	Housewives	12:5:95	Urban
	Fathers	6	Traders	12:5:95	
	Grandmothers	6	Traders	12:5:95	
Esa-Abinuyo	Mothers	8	Housewives	17:5:95	Urban
	Fathers	7	Traders	16:5:95	
	Grandmothers	8	Traders/Self employed	16:5:95	

### **Format of the Focus Group Discussions**

A moderator led the discussions with small groups of mothers, fathers and grandmothers (copies of the discussion guides are found in Annex II) in the local language (Yoruba). One or two assistants took notes and audio-taped the sessions, each of which lasted about 80 minutes.

In all the groups, projective techniques were used. Pictures of healthy and malnourished babies, and of mothers and fathers of different socio-economic levels were used to elicit the groups' concepts of ideal and problematic child feeding, characteristics of healthy and unhealthy children, and ideas about the characteristics and child-feeding practices of various categories of mothers and fathers.

The focus group discussions were held from May 2-17, 1995. The sessions were transcribed from the tapes for analysis.

## **III. FINDINGS**

### **Social Perceptions**

#### ***Concepts of Children and Child Health***

Mothers are concerned about their children's health. Most believe that food and drugs help make a child healthy. Some urban mothers also mentioned that *agbo*, a traditional herbal concoction, will keep a child healthy.

About three-quarters of the grandmothers mentioned that children today are healthier than their own children were. They attribute this to better care, cleanliness, availability of medical care and a balanced diet. However, grandmothers at Esa Abinuyo (urban) mentioned that due to the use of *egbogi* (traditional



medicine), their own children were faster in development, stronger and more intelligent than children of today.

Most fathers agreed that food is important for good health. They believe that a healthy child rarely gets sick, is strong, and looks well fed and happy. Most fathers also agree that cleanliness is essential for good health and alluded to the importance of bathing children in the morning and dressing them in clean clothes. Rural fathers said a sick child is taken to a VHW for care, while urban fathers mentioned the state hospital for child care during illness.

### ***Dreams and Aspirations for the Child***

All the mothers and fathers said that they are happy and proud to be parents. Parents expressed high aspirations for their children, hoping that their children's lives will be better than theirs. Fathers want their children to become professionals, such as lawyers, doctors, and nurses. They also want their children to be able to take care of them later in life.

Some fathers, especially in the urban areas, feel that their children would probably not be able to do this, because they, as parents, are currently unable to provide for all their children's needs due to the current economic situation in the country. Some fathers, however, were very optimistic that they would achieve their aspirations for their children through prayers to God.

Some rural mothers who are Christians want their children to grow and walk in the grace of Christ (*Ore-ofe Kristi*).

### ***Child's Needs from Birth - 6 Months***

All mothers agreed that the basic needs of a child from birth to 6 months include breastmilk, clothing, body hygiene, immunization, drugs, fluids and food supplements. In addition, urban mothers said children also need *agbo* for good health. Mothers in the (rural) non-BMC sites also mentioned multivitamin drugs and tonic. All mothers were of the opinion that breastmilk can be complemented with pap when the baby reaches 4-6 months of age.

### ***Grandmothers' and Fathers' Roles in Child Care***

Grandmothers from all the groups were happy and felt fulfilled in their roles of caring for their grandchildren. Some of these roles include feeding their grandchildren, seeing to the babies' personal and environmental hygiene and assisting in caring for the child when he or she is ill.

In general, fathers are more involved in child care than is often believed. They said that they too are involved in the care of sick children and in the provision of foods such as guineacorn, beans, rice, cassava and yam for the household. The discussants stressed that it is the sole responsibility of the fathers to provide food for the family and to ensure provision of good clothing and proper education for their children.

Most fathers, especially in the urban areas, said that running the home and raising children has become a difficult task due to financial constraints. About one quarter of fathers mentioned that it is indeed a daily struggle to earn and obtain enough resources for the household needs. Most of what they gave to infants 10-15 years ago in terms of infant formula and other feeds have now been replaced by *agbo*.



### ***Perception of a Good Father and Mother***

Fathers agree that a good father is one who cares for his wife and children and provides for their needs. This includes providing money for children's school fees, books, uniforms, food, clothing and health care.

The discussants believe that a good mother is one who performs her traditional roles very well. These include taking care of the children, cooking good food for the family, and taking good care of the home.

Pictures of men and women of different socio-economic levels were displayed during the discussions (see following pages for examples of some photographs used). The groups felt that the picture of a father and his child eating together, with the child on the father's shoulder, indicated shared love, a good interpersonal relationship, good health, and the child's obvious importance in the father's life. They also believed that the father has time for the child. About one-third of urban fathers believed that the man wearing a flowing gown in a picture would be a good father because he appeared to be responsible.

The discussants found it difficult to decide who was a bad father from the photographs shown. Some expressed their feelings by saying "Eniyan n wo oju sugbon Olorun ni n wo okan" (meaning you cannot predict a man's intentions from his appearance, only God knows the hearts of men). Several fathers chose the man sitting at a desk using a telephone as one who is not likely to be a great father. According to them, the man answering the telephone may be a businessman who would not have time for other things, including his child's welfare. More than half of the fathers also pointed out the picture of the drummer as one that will not have time for his wife and children, since he would be out most of the time entertaining at occasions. One rural father related his previous experiences when he used to go out and get drunk. He said "a drunken father never bothers about what goes wrong in his house."

A picture of a mother breastfeeding her baby was repeatedly chosen by the discussants as a depiction of a good mother. The reason cited was that we are in the era of exclusive breastfeeding and a good mother should practice it. "The way the mother carried the child shows how important the child is to her," one father said. A few people, however, selected the well-dressed lady because they perceived that since she looked good, she would be a good mother.

The majority of the fathers selected the picture of the dancing woman as representative of a bad mother. They believed that painted nails, dancing and playing about would take up most of the mother's time and therefore she would not have time for her children's upbringing. "She will prefer to go out rather than stay at home, and would therefore have limited or no time at all for breastfeeding or taking care of her children.

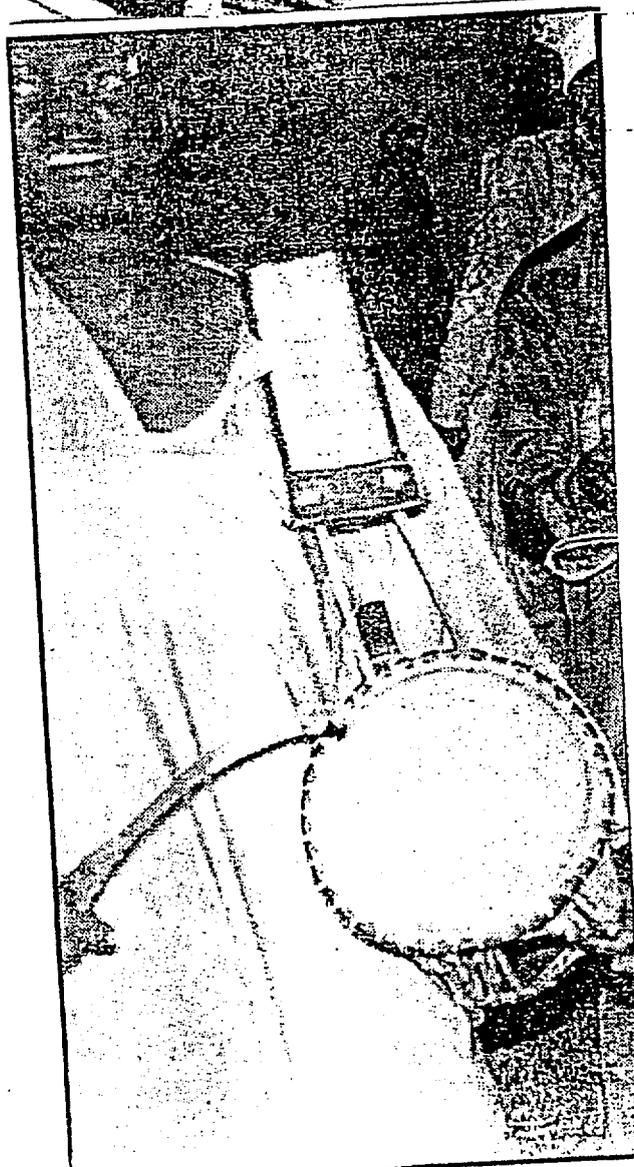
It appears from all the responses given that sophisticated ladies are seen as those who would rather give bottles to their children than breastfeed them. It is believed that these women's jobs (some cited prostitution) and some other activities prevent them from breastfeeding their babies. However, some urban grandmothers said that well-dressed women are likely to breastfeed their babies too.

Mothers in the non-BMC sites felt that a woman who is too flashy and fashionable in her appearance would not have the time or inclination to care for her child. While commenting on the picture of a "flashy" lady, one of the mothers said, "Eleyi, ologe ni. Asewo lo nse" (This one is too fashionable. She is a prostitute).

### ***Perception of Healthy and Unhealthy Infants***

Everyone seemed to recognize severe malnutrition, and many of the discussants were able to identify kwashiorkor from the photographs shown. This, they said, is caused by poor feeding, weaning (whether







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abrupt or not) and may also be a result of unplanned pregnancy. Many suggested the role of poor practices, such as eating cold or left-over food or having a monotonous, non-nutritious diet such as "left over cold *amala* or cold hard pap only." Due to the nonchalant attitude of mothers towards the care of children in Iluju, children are given whatever is available. Other reasons mentioned were illness and children being insufficiently breastfed. While commenting on a photo of a malnourished child, a father in the urban area said, "If a woman gets pregnant when lactating, the child will look like that because of abrupt weaning and neglect."

All the discussants were able to identify a well-nourished child. The fathers repeatedly declared that a healthy and strong child is more likely to come from a happy home where there is love, care and cooperation between the parents.

## **Infant Feeding Practices**

### ***Child Feeding Decisions/Influence and Change in Practice***

Most of the mothers mentioned that their husbands, health workers, doctors, nurses, mothers-in-law, mothers, and neighbors influence their decisions on child-feeding. However, fathers are the main decision-makers on infant feeding. Few fathers felt that their wives make these decisions on their own.

The majority of fathers in both the rural and urban areas mentioned giving advice to mothers on the care of children, especially when the children are sick. Other points mentioned include advice on child diarrhoea, care of feeding bottles, and preparation of food.

Most fathers said that their wives take their advice because they "own the wife." Urban fathers mentioned that they seek advice on child feeding practices from hospitals, while rural fathers mentioned mothers-in-law and village health workers.

About three-quarters of grandmothers felt that feeding practices today are better than in the past, when feeds were mainly breastmilk, water, and *agbo*. However, these days, infants are fed with infant formula and pap in addition to breastmilk. This they believe is due to the general awareness created by health workers on proper infant care.

Mothers at Oloya said that their husbands and health workers from BMC influence their child-feeding practices, while mothers at Tewure take advice mainly from their mothers, mothers-in-law, husbands and friends. They only occasionally get advice from health workers since the community has no resident TBA/VHW and only one, from Oloya, that visits the village occasionally.

### ***Motivations for Breastfeeding/Benefits of Breastfeeding to the Child and Mother***

All mothers (except for one with a 2-year-old baby) were still breastfeeding their children. Generally, mothers breastfed on demand (an average of 15 times per day) and believed that a good mother breastfeeds because breastmilk is good for babies.

Rural mothers said that they readily breastfeed their children anywhere without constraints, as they carry their babies with them wherever they go. Half of the mothers mentioned that breastfeeding promotes adequate development of a child. A few rural mothers said that breastfeeding prevents husbands from demanding sexual relations. Some urban mothers mentioned that by breastfeeding, they are obeying God's injunction, "Ase Oluwa ni."



Grandmothers concurred that a good and responsible mother will breastfeed her baby. The most commonly reported benefits of breastmilk, as cited by mothers and grandmothers, are:

- the provision of strength, energy, and vitality;
- steady growth and development of the baby;
- immunity for the baby; and,
- the creation of a love bond between a mother and her child.

Breastfeeding is highly valued and respected by fathers in rural and urban areas. All fathers said that breastfeeding is regarded as a natural method of infant feeding and that one does not "choose" whether to breastfeed or not. It is assumed that breastfeeding is a very basic part of having a child and of being a woman.

Many fathers believe that breastmilk is natural, fast, and easy to give to the child. The majority of the fathers also said that an infant can be well nourished on breastmilk alone.

The most commonly reported benefit of breastfeeding was the intimate communication between the mother and her infant, contributing to the creation of a love bond between the two. "The child will have pity on the mother in her old age," a father said. Breastfeeding, most fathers said, should continue for two years because it prevents sickness. They all agreed that breastfed babies are often good looking, strong and likely to be bright and knowledgeable in school.

### ***Constraints to Breastfeeding and Breastfeeding Problems***

Breastfeeding problems that participants mentioned included cracked nipples (soreness), swollen breast (infection), and flat nipples. They all affirmed that it is possible for a mother's milk to go bad (sour) if the breast is not sucked for hours or days.

A few mothers at Tewure said that fashion may hamper some women from breastfeeding. Such women, they stressed, may think that their breasts will become flabby if they breastfeed their babies. Some mothers mentioned maternal illness, infection and insufficient milk flow as breastfeeding problems. They suggested that mothers who experience insufficient milk flow should eat more, in order to facilitate lactation. Other breastfeeding problems mentioned by mothers at Oloya include sore nipples and engorgement of the breasts.

Most fathers mentioned insufficient milk production as one of the major constraints to breastfeeding. This perception was expressed strongly among the urban fathers. Few urban mothers cited insufficient milk production as a constraint. Breast infection and maternal ill-health were cited by the majority of the grandmothers as constraints. Some grandmothers, especially in the urban areas, mentioned two additional constraints: working mother's lack of time and women's poor socio-economic status, which can lead to anaemia and milk insufficiency. A few also cited mental problems as a constraint.

### ***Colostrum***

Some rural mothers (those in Oloya) who were influenced by the BMC program believe that colostrum should be given to newborns because it is good and contains antibodies. Other rural mothers and most urban mothers, however, believe that colostrum contains germs and should be expressed and thrown away. Mothers at Tewure explained that colostrum can be expressed by rubbing native soap called *ahomada* or *malafo* on the breasts. The breasts will then be left for a few hours. During this period, the infant will not be given water because they believe water will make the child cough.



Almost all grandmothers are aware of colostrum, which they say was not usually given to babies in the past. Half of them still believe that colostrum should be discarded because it contains germs, while the others said that it should be given because it enhances an infant's immunity to diseases.

### ***Exclusive Breastfeeding***

Most rural mothers have practiced exclusive breastfeeding successfully for at least four months. Some mentioned that by practicing exclusive breastfeeding they are obeying God's injunction "Ase Oluwa ni." Most of them mentioned that they are motivated to practice breastfeeding by health workers, doctors, nurses, mothers-in-law, mothers, and neighbors. A few rural mothers (in Tewure), however, said they gave glucose water and *agbo* to their babies from about three months. They believe that *agbo* is good for the child and will cleanse its stomach and prevent disease, while glucose water will prevent jaundice. These mothers said that Tewure had no resident TBA or VHW, so they obtain advice mainly from their mothers, mothers-in-law, husbands, friends, and sometimes from a distant village (Oloya).

Urban mothers, on the other hand, believe that it is impossible to breastfeed babies exclusively. They believe that babies will be thirsty if they don't drink water. Thus, they supplement breastfeeding from the first week of life with water and *agbo*. Rural grandmothers also mentioned that it is possible to breastfeed babies exclusively for four months, but urban grandmothers categorically felt that this was not possible because of mothers' jobs and babies' thirst.

All participants were against the idea of expressed breastmilk. They believe that such milk will become sour, watery and could cause diarrhoea. (Combating this idea might be an important communication objective).

### ***Feeding with Artificial Milk/Bottles***

There is very little use of other milk and infant formula among mothers who participated in the discussions. Most rural mothers said babies under 5 months should not be given any food besides breastmilk. A few rural mothers supplemented breastmilk with *agbo*, glucose water, and maize pap for babies below 4 months but did not give artificial milk. A few urban mothers gave infant formula to their babies from 3 months, while some reported that they would use formula if they could afford it.

Some of the reasons given by urban mothers for using formula include work responsibilities, inability to satisfy their child's hunger with breastmilk alone, and or mothers' ill health or death. Most urban fathers reported "insufficient breastmilk" as a reason for giving artificial milk. Some rural mothers and a few urban mothers, as well as grandmothers, were of the opinion that students, uncaring mothers, civil servants and educated mothers are likely to feed their children with artificial milk. Surprisingly, a few rural mothers mentioned that the high cost of formula is not a constraint to them.

Most rural mothers and half the grandmothers reported that they do not practice bottle feeding. The most commonly reported disadvantage of feeding with artificial milk, expressed by rural mothers and grandmothers, is that children become stubborn, unkind and exhibit animalistic behaviors. Other reasons include gastro-intestinal trouble such as diarrhoea, dysentery, and cholera. Some urban grandmothers stressed the high price of infant formula as a constraint: "Onje ti di golu" (food has become as expensive as gold). A few mothers mentioned that formula-fed children are not as strong ("Boto boto ni yio ri"-- the child looks flabby) as breastfed children. A few rural fathers mentioned the expiration of infant formula as a problem. Most rural fathers said that the use of the feeding-bottle is becoming unacceptable and that the change from bottle feeding to breastfeeding has been rapid due to the current economic situation in the country. A few fathers mentioned improper mixing of the formula and "stale" milk as problems associated with artificial milk and bottle feeding.



Current high prices and associated gastro-intestinal problems, such as diarrhoea and vomiting due to unhygienic preparation of baby foods, were cited by many discussants as major problems associated with bottle feeding.

### ***Introduction of Pap and Other Semi-Solids***

Most urban and rural mothers and grandmothers agreed that foods other than breastmilk should be introduced to the infant's diet from 4-6 months. They believe that at this age, breastmilk alone is no longer sufficient for the child. Three-quarters of the mothers said they start with pap, particularly millet pap, because they consider it to be more nourishing than corn pap. A few mothers, both rural and urban, however, reported giving pap to infants from 3 months.

Many mothers and grandmothers had not heard of adding ingredients to pap apart from sugar and milk, although a few rural mothers mentioned that they enrich pap with soya milk, raw eggs, and *kulikuli*. Some rural and urban mothers give plain pap to their babies, while a few enrich pap with sugar. One rural mother who looked a bit educated said she gives pap with a feeding bottle.

Some mothers who mentioned giving pap to their children said they would later introduce other foods such as *moinmoin*, *tuwo-oka*, *amala fele-fele* (soft *amala*) and *ewedu*, from about 12 months. Other supplements mentioned, especially by urban mothers, include soyamilk, fish, crayfish, and beans. One rural mother who mentioned beans as the only supplement gave knowing looks to other participants in a way that suggests that they may all be saying things that they probably could not and were not practicing.

### ***Lactation and Contraception***

In describing the process of lactation, many fathers mentioned the importance of maternal blood from which they believe breastmilk is generated. The majority of the fathers and grandmothers perceive a direct, immediate link between sexual intercourse and breastmilk production. It is believed that the milk of a nursing mother is contaminated by the sperm through sexual intercourse and that this causes the breastfeeding child to have diarrhoea or to develop kwashiorkor or fail to thrive. Mothers are of the same opinion, and their source of information is mostly the VHWs/TBAs and Community Health Extension Workers (CHEWs).

All fathers (urban and rural) agreed that breastfeeding should stop when sexual intercourse is to be resumed. Also, problems with lactation can sometimes be helped by avoidance of sexual intercourse.

In general, mothers and grandmothers from all groups believe that a mother who is breastfeeding can become pregnant if she has intercourse; therefore, abstinence seems to be the most accepted method of contraception. All are aware of family planning methods and believe that they work. However, knowledge on the use of modern contraceptives seem to be low in both rural and urban areas. A few urban fathers cited the use of condom and withdrawal as contraceptive methods. A few urban mothers use lactational amenorrhoea to space births.

Most mothers and grandmothers believe that birth intervals should be 3-4 years. Most feel good child spacing enables mothers to recuperate and children to thrive and become successful in the future. It also enables parents to adequately care and provide for their children. A few rural mothers felt that 2 years was sufficient.

All the mothers at Oloya were aware of the family planning programme, and most were also aware of modern contraceptive methods. They said that they have sexual relationships with their husbands while breastfeeding. They believe that with the use of contraceptive methods, the milk of a nursing mother is



not contaminated by sperm, and that the child cannot develop any illness. One mother mentioned her use of lactational amenorrhoea to space births.

On the other hand, mothers at Tewure indicated that they had never heard of any family planning programme. They believe child spacing is only achieved by abstinence from sex for a period of one and a half to two years. They also believe that a nursing mother should not have sexual intercourse since the baby can suck sperm from the breastmilk. Such babies, they stressed, will develop kwashiorkor or fail to thrive well.

### ***PHC Growth Monitoring Chart***

The PHC growth monitoring card was also field tested to find out mothers' opinions and awareness of the card. All mothers knew about this card and majority of them had it. Believing that it is used for immunization, they often refer to it as their immunization card. Some also mentioned that it is used for recording the weight of the child for growth monitoring. However, a few found it difficult to recognize the pictogram of the breastfeeding mother on the chart.

## **IV. CONCLUSIONS**

The relatively good knowledge, attitudes and stated practices revealed in the rural focus group discussions may indicate the strong and useful impact of the Baptist Medical Outreach Programme in Ogbomosho. This impact is evident in the health of mothers and their children and in their stated child feeding practices. Exclusive breastfeeding and good feeding patterns would seem to be the norm.

Rural grandmothers have also benefitted from the Ogbomosho Baptist Medical Outreach. They believe in and encourage their daughters and daughters-in-law to practice exclusive breastfeeding. Some rural mothers, however, do not believe in or practice exclusive breastfeeding. They give glucose water or *agbo* from three months, and a few begin millet pap then.

Most urban mothers believe and practice supplementing breastmilk with water and *agbo* right from birth and do not believe exclusive breastfeeding is possible due to the baby's thirst and mother's lack of time. Giving water and *agbo* is also accepted and usually encouraged by most urban fathers and grandmothers, while a few rural fathers also encourage this practice.

The little use of artificial milk and bottle feeding was found mainly among a few urban mothers, while others said they would use artificial milk if they could afford to. The most commonly reported problem with artificial milk and bottle feeding among mothers and grandmothers, particularly rural, was that children fed with artificial milk are often stubborn, unkind, and exhibit animalistic behaviors. Gastro-intestinal problems, such as diarrhoea and vomiting, and current high prices of infant formula and feeding bottles were commonly reported among fathers and a few mothers and grandmothers as deterrents to bottle feeding.

Motivations for using artificial milk and feeding bottles by mothers, mostly urban, include mothers' job, insufficient breastmilk, maternal death or ill health, while insufficient breastmilk was the motivation strongly expressed by most urban fathers.

Although various breastfeeding problems were highlighted among discussants, the ones most commonly reported were breast engorgement, insufficient milk production and sore nipples.



All discussants are against the idea of expressed breastmilk, because they feel it will become sour, watery and cause diarrhoea. Half of them are still against the idea of giving colostrum to babies, believing that it is dirty and can harm the infant.

The most common first food given to infants to supplement breastmilk is maize pap. Mothers and grandmothers reported giving plain pap while a few mothers enriched pap with sugar. Most discussants were not aware of other ingredients that could be added to enrich weaning pap.

In most urban and a few rural areas, fathers are the main influencers of child feeding decisions and changes in practices, while in some rural areas, health workers are the chief motivators. Others include mothers, mothers-in-law, neighbors, and friends.

Modern contraceptive methods are unknown to most discussants, and sexual abstinence is the method used for child-spacing. One rural village (Tewure) reportedly has no resident TBAs or VHWs, and this may have contributed to the knowledge, beliefs, and practices found in the community.

## V. RECOMMENDATIONS

Based on all the findings, the following are recommended:

- ◆ Health messages should cover the hygienic practices that are most important in promoting good health in children.
- ◆ The benefits of proper infant-feeding practices in reducing illnesses among children should be used as a motivation to encourage mothers.
- ◆ Health education should also target fathers, because they are responsible for making decisions that affect child feeding and welfare.
- ◆ Mothers, mothers-in-law, and predominant CBDs who give health information should be given more information on the advantages of exclusive breastfeeding.
- ◆ Giving of prelacteal feeds such as *agbo*, water and glucose water should be discouraged. Mothers can be encouraged to offer breastmilk for the same reasons they give other foods, such as to stop baby crying, lubricate the throat, or clear the gut.
- ◆ Mothers should be given adequate information on the importance of colostrum for their babies.
- ◆ A small group of educated, urban, employed women can be targeted to adopt the practices of expressing breastmilk for their babies.
- ◆ A better understanding of the relationship between breastfeeding and child spacing should be promoted.
- ◆ Messages encouraging mothers not to terminate breastfeeding abruptly when they become pregnant should be disseminated. Lactating pregnant mothers should be advised to eat well.



- ◆ Care must be taken in the choice of pictures that are used during community health education. Pictures of ladies should not be too flashy. Also, community educators should be modest in their dressing.
- ◆ The PHC card requires a large pictogram of a breastfeeding woman who is sitting in a more conventional and acceptable manner while breastfeeding.
- ◆ Mothers at Tewure should be given more information on exclusive breastfeeding and its advantages.
- ◆ The activities of health workers in the rural communities should be intensified and extended over a wider geographical area.



## PART 2: HEALTH WORKER INTERVIEWS

### I. INTRODUCTION

The purpose of the health workers study was to investigate the current beliefs on infant feeding held by various community-based health workers who may be involved in the implementation of EPB's activities, and to assess their motivations for and constraints in providing counseling on infant feeding.

Sixteen individual interviews were conducted (using a semi-structured questionnaire) with VHWs/TBAs, CHEWs and CBDs who were drawn from different locations in the selected areas of study (Ogbomoso and Osogbo). The different categories of respondents and their locations are shown in Table 3.

The interviews were used to obtain information on the work of the health workers and the child-feeding practices of mothers with infants less than two years old in their areas of operation; health workers attitudes towards, knowledge of, and practices regarding infant feeding; problems encountered in their jobs; and possible ways of solving these problems. (The interview guide is found in Annex III). The interviews were held May 2-17, 1995.

**Table 3: Different Categories of Health Workers and their Locations**

Health Workers	Location	Number Interviewed in Each Location	Total
CHEWs	Ogbomoso	4	4
VHW/TBAs	Iluju	1	4
	Lekewogbe	2	
	Elesinmeta	1	
CBDs	Osogbo	8	8

### II. FINDINGS

#### Health Workers' Functions and Feelings Towards Work

##### *Community Health Extension Workers (CHEWs)*

The responsibilities of the CHEWs interviewed are include immunizing and weighing infants and giving talks on health education. Only two of the CHEWs have attended deliveries. All four CHEWs are interested in giving health talks to mothers on children's health.



### ***Village Health Workers/Traditional Birth Attendants (VHWs/TBAs)***

The responsibilities of the VHWs/TBAs interviewed include giving health education talks, treating minor ailments, making home visits, and delivering babies. Only one of the VHWs, who was recently trained, has never delivered a baby. The other three are experienced VHWs/TBAs.

Two of the four respondents prefer delivery of babies over their other responsibilities because of the fulfillment they derive from it, while the other two prefer treating minor ailments. According to them, this indirectly aids their health education talks because their clients prefer to be treated first before listening to any health talk.

### ***Community Based Distribution Agents (CBDs)***

All eight CBDs interviewed said they motivate and counsel clients on family planning as well as sell family planning commodities to them. One of them, who has been trained as a TBA, also attends deliveries.

Three of the CBDs prefer giving health education talks to clients, another three prefer family planning activities and counseling, while the other two were found to prefer delivery of babies and caring for babies respectively. Some of the reasons given for their preferences include avoiding contracting diseases from some patients and helping to ensure that parents have healthy children.

## **Infant Feeding Practices**

### ***Breastfeeding of Newborn Infants***

All the CHEWs, VHWs/TBAs and four of the CBDs agreed that breastmilk is usually the first food given to the newborn infant and that breastfeeding should commence as soon as the woman has recovered well enough to put the baby to the breast. They said they usually recommend this to mothers. Two of the CBDs said that they had no idea what the newborn's first food is since they do not follow their clients home. One of them mentioned water and another mentioned *agbo* as the first thing given to a newborn infant.

All the CHEWs, three VHWs/TBAs and six CBDs said colostrum is given to newborn infants because they have taught the mothers (during the ante-natal period) that it contains antibodies and that it is good for babies. However, one newly trained male VHW said that it should be discarded because it contains germs, poison and disease. Two CBDs were also of the opinion that colostrum is poisonous and dirty and thus should not be given to babies.

### ***Breastfeeding Practices with Infants Less than 4 Months Old – Frequency and Duration of Breastfeeding***

All the respondents mentioned that mothers within their areas breastfeed their babies on demand, and they all believed this frequency is correct. However, one CBD said that working mothers may, out of necessity, breastfeed their infants on a planned schedule - between five and six times a day. All the respondents mentioned that mothers in their areas sleep with their babies next to them and breastfeed them during the night. One CBD expressed her fear that a baby may be inadvertently suffocated with this practice.

On feeding the child when the mother is away, the majority of the respondents felt that mothers should carry their young infants with them wherever they are going in order to breastfeed them. One



VHW/TBA suggested that infants should be given water to prevent them from crying when the mother is away. Four of the CHEWs suggested that mothers should express their breastmilk for the infants before leaving the home.

The following were mentioned by the CHEWs as the common problems of breastfeeding:

- breast abscess/infection
- retracted nipple
- flat nipple
- sore nipple
- insufficient milk production
- maternal weight loss due to insufficient feeding
- flabby breast
- maternal death
- cleft palate
- prematurity
- maternal illness
- thrush
- jaundice
- tetanus

The respondents mentioned that they always advise mothers who complain of insufficient milk to drink plenty of fluids, e.g. water, tea, and soymilk, and to eat high-protein foods. One of the CHEWs (male) could not identify any problem associated with breastfeeding.

The following problems of breastfeeding were identified by the VHW/TBAs:

- sore nipple
- breast abscess/infection
- mother's fatigue
- insufficient milk

Two of the respondents mentioned that to solve these problems, they normally recommend that the affected mothers should eat a balanced diet and take plenty of fluids, and that these mothers comply with their recommendations. Two of the respondents, however, could not name any problem associated with breastfeeding.

The following problems of breastfeeding were mentioned by CBDs:

- soreness of nipple (6 respondents)
- maternal weight loss (2 respondents)
- failure of child to thrive (1 respondent)
- insufficient milk (2 respondents)

The majority of the respondents mentioned that they advise mothers to eat and drink more in order to have sufficient milk. One respondent said that she refers clients with such problems to a doctor. Two of the respondents were unable to identify any problem.

***Exclusive Breastfeeding (EB)***

All the CHEWs and three VHWs/TBAs defined EB as giving of breastmilk alone, without water or any other fluid, to infants. One VHW said that EB means breastmilk should be given to the child because

both breast and child belong to God. Five CBDs defined EB as giving breastmilk to the child for a period of three months or longer, as well as giving small quantities of water occasionally to quench baby's thirst.

All the CHEWs, and three VHWs/TBAs agreed that EB is possible for the first 4-6 months and that no other feeds should be given during this period. They also believe that breastmilk alone contains all that the baby needs for the first 4-6 months of life. One VHW's belief was that babies should be breastfed exclusively for two years. Three CBDs mentioned that EB is possible and should be done for three months without giving the child feeds of water or other fluids.

### *Cessation of Breastfeeding*

The common practice among the rural women, as cited by the CHEWs and VHWs/TBAs, is to stop breastfeeding their babies when they are between 1 1/2 - 2 years old.

Reasons given for why mothers stop breastfeeding at this age include the following:

- to allow couples to resume sexual relations;
- to give room for another pregnancy;
- at this age, the child is old enough and can survive without breastmilk;
- the child is now able to walk;
- the child is now able to eat the family diet;
- to allow the mother to resume work fully if she is a civil servant;
- to allow the mother to resume full-time trading if she is a long distance traveller/trader (*alajapa*);
- peer influence (friends, neighbors and relations); and,
- to recuperate on time from the ordeal of labor and puerperium.

Two CBDs mentioned that some mothers stop breastfeeding when their babies are 6-12 months old, and two others said between 12-18 months.

Reasons given by urban mothers for stopping breastfeeding include the following:

- occurrence of another pregnancy;
- maternal health;
- child already accustomed to family diet;
- mother's need to return to work; and,
- breastmilk is no longer necessary for babies.

One CBD believed that babies should be breastfed for 36 months (three years), while all the CHEWs, VHWs/TBAs and 7 CBDs felt that babies should be breastfed for two years. Their reasons include the following:

- the child would have been accustomed to family diets;
- the child would be healthy enough by now;
- the child would have survived early childhood illness; and,
- the mother is aiming at full recuperation from the ordeal of labor and puerperium.

While they all advocated adequate breastfeeding for the child, three VHWs/TBAs stated that some conditions could prevent a child from breastfeeding or being breastfed, depending on where such conditions exist (either with the mother or the child). Among the conditions mentioned are:



- breast infection
- psychosis in the mother
- maternal death
- maternal illness
- non-lactating breast
- fever and oral thrush in babies
- diarrhoea cases in children

### ***Supplementary Feeding in Infants Less than 4 Months Old***

All the CHEWs, VHWs/TBAs and six CBDs were against the use of formula for infants less than four months old. However, six CBDs, two of the CHEWs and one VHW were of the opinion that baby formula could be given in cases of maternal death, maternal psychosis, breast infection and/or tetanus or meningitis in the baby. The two CHEWs, however, stated that they had never recommended this before to any of their clients. Two of the eight CBDs believe formula is good and can be recommended for working mothers. They also believe that it ensures steady growth of infants.

In general, none of the CHEWs or VHWs/TBAs interviewed had recommended bottle feeding to mothers. According to them, mothers in their areas do not practice bottle feeding. The health workers believed that mothers may not keep the bottles clean and that this could lead to diarrhoea and other infections in infants.

### **Assessment of Knowledge and Attitudes of Health Workers Regarding Infant Feeding**

All the respondents mentioned that mothers are usually the ones who seek counsel concerning infant feeding. The nature of advice sought by mothers from health workers includes the following:

- What food to give to their baby to make them thrive?
- What they should give when the child is ill?
- What to use in enriching the baby's pap?
- What to give to a child who is not breastfeeding?

The health workers also mentioned that mothers often accept their counseling because they see the positive results of their advice on the child's health (i.e. the baby thrives).

The VHWs/TBAs stated that they occasionally advise fathers and grandmothers on infant feeding as they believe that these people are also directly involved in child care. Two VHWs/TBAs emphasized that some mothers still obtain permission from their mothers, mothers-in-law and/or husbands before complying with the advice given to them on infant feeding -- their reasons for this being to obtain consent and cooperation from these people.

### ***Feeding of Infants over 4 Months Old***

All respondents believe that complementary semi-solid food should be introduced from 4-6 months. This could be pap made from maize or sorghum that is enriched with any of the following: soymilk, crayfish, roasted groundnuts, sugar, evaporated milk, egg, meat broth, dried fish, or powdered milk. These foods, they stressed, should be given to children to complement breastmilk as this will help them to acquire the necessary immunity and enable them to grow well.



Most believed that beginning at six months, other complementary foods should be introduced. These should include fruits, beans, soft *amala* and *ewedu*, fish, melon, *eko*, *moinmoin* (without pepper), and *gbegiri* (bean soup). The reasons given are:

- to gradually introduce the baby to the family diet;
- to ensure that the baby has an adequate intake of vitamins and minerals; and,
- to protect the infant against illness and provide strength.

One CBD, however, said that other foods should not be introduced to the child until after s/he reaches two years. Such food include *eba* and fruits.

### *Feeding during a Child's Illness*

Three CHEWs, two VHWs/TBAs and three CBDs said that infants should be breastfed more than the usual number of times when they are ill, especially when they have diarrhoea. This is to replace lost body fluids and to assist the child to regain his or her strength. One CHEW, one VHW/TBA and one CBD said the child should be breastfed as usual so that s/he would not lose weight and would remain strong. One VHW/TBA and one CBD, however, said the child should be breastfed less than usual to allow diarrhoea to stop and to prevent vomiting.

Three CHEWs, two VHWs/TBAs and six CBDs mentioned that the mother should stop giving formula if the child has diarrhoea. They believe that the diarrhoea will stop if formula is stopped because the formula itself is one of the causes of diarrhoea. One CHEW said that formula should continue as usual to replace lost fluids and nutrients. One VHW and one CBD said that the quantity of formula given should be more than the usual amount to prevent vomiting and to allow the child to regain strength. However, one VHW and one CBD said that less than the usual amount should be given to hasten recovery and prevent vomiting.

Three CHEWs and three VHWs/TBAs mentioned that water and other fluids should be given more frequently to replace lost fluids. One CHEW and three CBDs said that these should be given as usual for the same reason, while one CBD said that these should be given less than usual.

Two CHEWs and two VHWs/TBAs mentioned that pap should be given more than usual to replace lost fluids. One CHEW, one VHW/TBA, and three CBDs mentioned that the quantity of pap given should be as usual for the same reason, while one CHEW, one VHW/TBA and three CBDs said less pap should be given to stop vomiting or diarrhoea and to allow child to consume more of ORT. Two CBDs, however, mentioned that pap should not be given at all to hasten child's recovery.

One CHEW and one VHW/TBA said that the amount of other foods given should be increased when a child is ill to ensure speedy recovery. Two CHEWs, one VHW/TBA, and two CBDs mentioned that infants should be given other foods as usual when they are ill to replace lost energy, while one CHEW and one CBD said that babies should be given less food when they are ill since they would normally lose their appetites during illness. The CHEWs further stressed that babies should consume more food during convalescence.

Five CBDs and one VHW/TBA believed that infants should not be given other foods when they have diarrhoea. This, they said, will enable the child to recover quickly. The VHW, however, mentioned that the child should be given ORT after each stooling. One VHW/TBA did not give any response on this.



### ***Breastfeeding during Maternal Illness***

All the VHWS/TBAs, three CHEWs and one CBD recommended that breastfeeding should continue if the mother's condition allows it. This will ensure continuous lactation and also prevent the child from falling ill. The VHWS/TBAs added that the cessation of breastfeeding could lead to total rejection of the breastmilk by the child after the mother's recovery. The four CHEWs mentioned that the baby could be given expressed breastmilk when the mother is ill and unable to breastfeed.

Seven CBDs and one CHEW said that breastfeeding should stop if maternal illness is infectious. The CHEW further added that apart from giving baby expressed breastmilk, the baby can be breastfed by a surrogate mother.

### ***Mothers' Post-Partum Diet***

The majority of respondents believe that mothers should eat more often during lactation. However, one CHEW and one VHW/TBA said that eating during lactation depends on individual body demands, so a lactating mother should eat as her body demands.

All respondents, with the exception of one CBD, talk to mothers about post-partum eating. They advise mothers to eat a balanced diet and to take more fluid such as pap, tea, water and fruits so as to ensure adequate production of breastmilk. However, one CBD was of the opinion that mothers should take less fluids than usual.

The health workers stated that mothers usually follow their advice because they believe that they (the health workers) know their jobs well and would not deceive them.

### **Breastfeeding, Sex and Contraception**

One CHEW and two CBDs mentioned that mothers never asked them about family planning, although they talk about it to the mothers.

Three CHEWs, six CBDs and all the VHWS/TBAs said that they refer these mothers to the family planning clinic at the Baptist Medical Centre in Ogbomoso. The intervals between child birth and consultation at the family planning clinic differ, but they are generally not before one year after their last delivery. Five CBDs and two CHEWs, however, said that some mothers often seek advice about family planning six weeks after delivery.

The VHWS/TBAs also said that they usually do not suggest any family planning method to the mothers since they refer them to the family planning clinic at the Baptist Medical Centre. Two CHEWs agreed that they counsel mothers to choose specific methods. Two other CHEWs stated that a multigravid woman is often counselled to go for the permanent method of family planning while the young ones are advised to go for IUCD, oral pills or injectables. Seven CBDs said that they recommend condoms, pills and foaming tablets for mothers, while one CBD does not recommend any method.

### ***Breastfeeding and Family Planning***

All respondents agree that mothers often continue breastfeeding after accepting a family planning method, because they (mothers) believe that family planning methods cannot disturb breastfeeding.



### ***Breastfeeding and Abstinence***

Six CBDs mentioned that abstinence is no longer practiced because of other forms of family planning, while two confirmed that despite people's knowledge of other forms of family planning, a few still practice abstinence. Responses from the four CHEWs indicated that the mothers do not abstain from sex while breastfeeding. Three of the CHEWs stated that they have educated mothers on this issue and allayed their fears on sperm mixing with breastmilk. One CHEW mentioned that some couples use the withdrawal method as a form of family planning while the mother is still breastfeeding to avoid the discharge of sperm into the vagina.

### ***Lactational Amenorrhoea***

All CBDs, three VHWs/TBAs and two CHEWs stated that mothers complain to them about lactational amenorrhoea, and they usually refer them to a doctor or reassure them that menses will resume with time. The other two CHEWs said that mothers do not complain about lactational amenorrhoea, rather (one of them reported), most mothers complain of losing too much blood during menses while breastfeeding. One VHW/TBA said that mothers do not come to her with this problem.

None of the respondents mentioned awareness of the relationship between exclusive breastfeeding and child spacing.

### **Improving Service Delivery**

#### ***CHEWs***

All four respondents said that they are always happy to give nutritional advice to mothers. On average, each of them spends approximately 6 hours per week giving nutritional advice to mothers. Two CHEWs perceived no problem in discharging their duties. However, two of them identified the following as problems hindering effective service:

- inadequate staffing;
- inadequate means of transportation, especially to the very remote villages; and,
- lack of knowledge about current breastfeeding practices.

The following solutions were offered by the two CHEWs for the problems identified above:

- supply appropriate posters that could assist in disseminating nutritional information;
- retrain staff to update their knowledge on infant feeding practices;
- refurbish the outreach vehicle or purchase a new one;
- provide teaching materials such as ORT trays; and,
- give souvenirs for well fed babies to encourage mothers to breastfeed exclusively for longer periods.

#### ***VHWs/TBAs***

The four respondents mentioned that they are always happy to include counseling of mothers on infant feeding as part of their work. Each of the four respondents spends from 10 to 35 hours a week on their job, out of which they spend three to five hours counseling on infant nutrition.

They all agreed that the following will be needed for more effective services:



- refurbishment of the outreach vehicle or purchase of a new vehicle or motorcycle to enable them to move around;
- provision of visual aids;
- retraining to update knowledge on infant feeding practices;
- subsidized drug; and,
- monetary incentives.

### *CBDs*

All expressed happiness and satisfaction with their jobs. On average, they spend four to five hours per week giving nutritional advice.

Some of the problems mentioned included lack of transportation, incentives, and boxes for transporting commodities.

Some of the possible solutions mentioned include: provision of a vehicle, transport allowances, and more incentives.

## III. CONCLUSIONS

Although advising mothers on infant feeding is not part of the CBDs' job description, mothers in fact ask CBDs many questions on this subject, which the CBDs have not been trained to answer. This study confirmed that VHWs/TBAs and CHEWs are more knowledgeable concerning breastfeeding than CBDs. For instance, while VHWs/TBAs and CHEWs believe that infants should be breastfed exclusively for four months, most of the CBDs believe that infants should be given water in addition to breastmilk. Also, some of these health providers (particularly the CBDs and VHWs/TBAs) are still of the opinion that colostrum is poisonous and dirty and thus should not be given to babies.

Most of the health providers (VHWs/TBAs, CHEWs, CBDs) are of the opinion that breastmilk should be the first feed of the newborn child. The general opinion was that infants should be introduced to semi-solid foods such as enriched pap from 4 months. The health workers, especially the VHWs/TBAs and CHEWs, are against feeding infants formula.

All the health providers interviewed talk to mothers about family planning. However, it appears that the VHWs/TBAs interviewed are not very familiar with artificial family planning methods. None of the respondents seem to be aware of the relationship between exclusive breastfeeding and child spacing.

The VHWs/TBAs would be good channels of information on breastfeeding, since their job includes delivery of babies and home visits. They have more contact with nursing mothers than any other health provider, particularly in rural areas. CHEWs would also be good channels of information because they give health talks.

## IV. RECOMMENDATIONS

Based on the result of these interviews, it is recommended that:

- ◆ The different categories of health providers should be given intensive training on proper infant feeding, particularly breastfeeding.



- ◆ Health providers should be well oriented on the relationship between sucking and breastmilk production and should be encouraged, in turn, to educate mothers on this concept.
- ◆ CBDs in particular should be given more information on exclusive breastfeeding and the fact that breastmilk contains sufficient water for babies under 6 months old.
- ◆ An intensive family planning course should be organized for the CHEWs, VHWs/TBAs, and CBDs. It should include the lactational amenorrhea method so that they can encourage mothers to exclusively breastfeed for the first 4-6 months of life.
- ◆ The CHEWs, VHWs/TBAs and CBDs should be trained on the causes and management of diarrhoeal diseases.
- ◆ The following Yoruba phrases obtained from the completed questionnaires might be useful in designing program messages and materials:
  - "Omo ti won ba fun omu nigba ti won bi, o ma ndan yato si omo eyi ti won nfun ni omi." (A child who is breastfed immediately after delivery looks healthier than a child who is given other fluids such as water.)
  - "Aje saia ni omi omu akoko je fun omo." (Colostrum confers immunity on the baby.)
  - "Omi omu yio je ki omo agbaia, yio si je ki awo re ki o ma dan. Omo na yio si ma wu enia lati gbe." (Breastmilk makes a child strong and the skin look healthy, so people will always feel like carrying the child.)

### Technical Concepts for Health Providers/Counselors

Persons who counsel mothers should be familiar and comfortable with the following technical concepts on breastfeeding and child feeding. Although much of this information is also important for mothers (and to family members who influence them) to know, it is not the same as the IEC (communications) messages, because: (1) Nigerian mothers are already doing some of these things well, so there is no need to use precious time with them for those concepts; and (2) a complete IEC message transforms the technical information into a feasible practice that mothers are urged to follow. Messages also contain effective motivations for following the recommended practices, and they address (try to overcome) negative attitudes or other constraints that mothers may have against following the advice.

#### *Breastfeeding*

- ▶ Mothers should initiate breastfeeding within the first hour after birth. Doing this helps prevent serious maternal bleeding (hemorrhage), helps the body more quickly expel the placenta, and stimulates early breastmilk production. It also helps create a unique psychological bond between the mother and child.
- ▶ Colostrum is very good for the baby. It is like the first immunization for the baby because it contains those things (called antibodies) that protect the baby against diseases like pneumonia and diarrhoea. Colostrum does not contain germs or dirt.



- ▶ Breastmilk contains enough water for the baby. There is no need to give the baby water or glucose water or a native potion such as *agbo jedijedi*. Babies on breastmilk alone do not get constipated.
- ▶ Breastmilk contains all the nutrients the baby needs in the right proportion and at the right temperature.
- ▶ Breastfed children are less prone to infection than those fed artificial formula.
- ▶ Breastfeeding encourages emotional bonding between mother and child.
- ▶ Breastfeeding should be on demand, day and night. Preferably, the mother should sleep with the baby by her side. She can breastfeed while lying down and the baby will not be crushed or suffocated.
- ▶ The baby should feed on both breasts at each feeding time, and the one she feeds on first should be second for the next feed. As much as possible, one breast should be emptied before the baby is shifted to the other so that the baby sucks both foremilk and hindmilk. Hindmilk contains more fat which is essential especially for brain development.
- ▶ If a mother feeds her baby often enough, she will have sufficient milk. The more often and the longer feedings are, the more milk the mother will produce. Even the mother of twins or triplets produces enough milk as long as she nurses often enough. Mothers who may think they have "insufficient milk" are probably not breastfeeding often enough, or maybe they are not holding the baby in a good position for feeding, so the baby gets frustrated and the nipple is not stimulated enough to keep producing enough milk.
- ▶ Mothers may think that if a baby who is breastfeeding starts crying, it is frustrated because it is not getting enough milk. It is possible that the baby is not getting enough milk because it is feeding in a bad position. Or perhaps the baby is crying because it has air and needs to be burped.
- ▶ Milk flow is reduced if the mother is anxious, does not rest or does not feed the baby on demand or uses estrogen-containing contraceptives. It is also reduced in those who use tobacco (smoking, snuffing or chewing). Even when a mother does not smoke, constantly staying in a room where others smoke can affect her because she inhales the smoke and is therefore indirectly smoking.
- ▶ In rare cases, the baby is unable to suck well because of weakness or an abnormality. The mother can express her milk manually by pressing or using the "warm bottle" method and give the milk by cup to the baby.
- ▶ The size of breasts does not determine the amount of milk produced. Small breasts may produce more than big ones.
- ▶ Work away from home should not be a barrier to breastfeeding. Breastmilk can be expressed and given to the baby with cup and spoon by another person when the mother is not around. It can be kept at room temperature for about 8 hours in hot countries like Nigeria. It can keep for about 24 hours in a good refrigerator or kept frozen for several days.
- ▶ Milk in breasts does not go sour or stale even if the mother does not breastfeed for a long time.



- ▶ A baby whose mother dies can be breastfed by another woman in the family, e.g. the grandmother, aunty, or father's other wife.
- ▶ Breastfeeding does not make breasts sag or change shape ("slippers"). As a woman grows older, the support of the breasts slacken and the more pregnancies she has, the more the number of times the support gets stretched.
- ▶ When breasts are engorged, sucking by the baby reduces the amount of milk in the breasts and subsequently, the mother's pain.
- ▶ Even when there is an abscess, the baby should be fed. A large abscess may need to be drained in the clinic/hospital.
- ▶ Breastfeeding contributes to keeping the mother's shape. As long as the mother eats and drinks a reasonable amount, breastfeeding does not cause weakness or lead to malnutrition.
- ▶ As long as menstruation has not returned, exclusive breastfeeding (feeding baby on demand on breastmilk only) protects against pregnancy in the first six months after delivery.
- ▶ Sexual relationship while breastfeeding is not dangerous to the baby. The baby cannot suck sperm from the milk. However, mothers must take precautions to prevent pregnancy if they are not breastfeeding exclusively or if the baby is more than 6 months old or if menstruation has resumed. Appropriate child spacing methods (natural and modern) -- e.g. barrier methods (condoms, foaming tablets, diaphragm, jelly) -- can be used as early as possible. Mini pills can also be used but estrogen-containing pills reduce milk production and should be avoided.
- ▶ Mothers should be encouraged to seek the assistance of a trained counselor, such as a doctor, nurse, or VHW, if she is concerned about her babies' breastfeeding or is suffering from some common but treatable problems such as sore nipples or breast abscesses.
- ▶ It is important for the baby's health to continue breastfeeding normally when the baby or the mother is ill. The ill baby especially needs breastmilk. The ill mother will not make her baby sick because the breastmilk itself contains the antibodies of the infection and therefore protects the baby from it.

### *Complementary Feeding*

- ▶ Complementary foods should be given to the baby from about 6 months, when breastmilk alone cannot meet the energy and other nutrient needs of the baby. Introducing foods earlier may lead to diarrhoea and dehydration.
- ▶ Locally available foodstuffs should be used to enrich pap and other gruels (the most common weaning foods). The decision to use groundnuts, beans, soybeans, melon seeds, ground fish, crayfish, sugar, or palm oil depends on their acceptability by the baby, cost, and convenience of preparation.
- ▶ A variety of mashed foods, e.g. yam pottage, rice, beans, and soft foods like *eko afala*, *ekuru*, *moinmoin*, *amala* or *tuo* with vegetable soups, bean soup (*gbegiri*) groundnut soup, or melon soup, should be given so that the baby has all essential nutrients.
- ▶ At each feeding for babies over 6 months old, the baby should be breastfed first, before being offered complementary foods.



- ▶ Thicker pap (not a liquid) has more nutritional benefit than thin. Even babies 5 or 6 months old can swallow and digest thick pap well.
- ▶ A fruit per day in mashed or juice form will provide adequate vitamin C. There is no need to buy vitamin C.
- ▶ The baby should be fed from its own bowl so the mother knows how much and what the child is eating, at least twice a day for 5-6 month olds, at least three times a day for 7-8 month olds, and at least four times per day for babies 9-12 months old. Nutritious snacks, e.g. *akara*, *kulikuli*, or biscuit, should be given between meals.
- ▶ When introducing foods at 5-6 months, the mother should begin with small amounts and gradually increase to a few spoonful twice a day. New varieties of food should be introduced using cup and spoon.
- ▶ The mother or other person feeding the child must do so patiently. Force-feeding is dangerous because the baby can choke and because it encourages feeding liquid foods that are not very nutritious.
- ▶ When the baby is ill, mothers should continue feeding. They should give small amounts more frequently than normal. They must be patient.
- ▶ By 12 months of age, a child should be on an adult diet but with plenty of sauces and soups.



## PART 3: HOUSEHOLD ACTION TRIALS

### I. INTRODUCTION

The household action trials were carried out to ascertain the potential for changing or modifying inappropriate infant and young-child feeding practices. The trials also helped to determine potential motivations for mothers to change or modify existing practices.

The study was conducted in the Ogbomoso area in Oyo state (rural) and in Osogbo and Iwo in Osun state (urban). A total of 58 infants aged 0-24 months old from low-income households participated in this phase of the formative research. The trials were carried out in May and June 1995.

The objectives of the research were:

- ◆ To test, at the household level, the acceptability and feasibility of possible recommendations for improving young child feeding;
- ◆ To get realistic input from mothers on both their willingness to try recommended changes and their responses to their trials;
- ◆ To gather information that will guide the development of an effective IEC component of a strategy to improve feeding practices and child nutritional status.

### II. METHODOLOGY

#### Training of Interviewers

A seven-day training session was organized for the interviewers. The curriculum consisted of the following:

- a review of infant and child nutrition;
- discussion on the ideal versus the actual feeding practices for the target age-groups and reasons for concern;
- instructions on the correct use of the recruitment forms and practice in recruiting;
- a complete explanation of each question guide and how to record responses to each question;
- a review of the 24-hour dietary recall and the use of local measures to estimate food quantities; and,
- techniques and practices in motivating respondents to adopt recommendations.

The interviewers were divided into two teams, each team comprised of three interviewers and a supervisor. One team worked in the rural area (Ogbomoso) while the other team worked in the urban areas (Osogbo and Iwo).



## Selection of Study Sample

Two low-income rural communities (Biuro and Okin) were selected in Ogbomoso with the assistance of the Director of Community Health and General Practice Training Programmes of the Baptist Medical Centre, Ogbomoso, while two low-income urban locations (Isale Osun and Oke-Odo) were selected, in Osogbo and Iwo respectively, with the assistance of the coordinator for the state chapter of the National Council for Women Societies.

The selection of the households was done by the interviewers. A total of 29 urban households and 29 rural households with children aged 0-24 months were selected. Both healthy and undernourished infants participated in the investigation. The age distribution of the children in the sample is shown in Table 4. The caretakers were made up of 55 mothers (28 rural and 27 urban) and three grandmothers (one rural and two urban).

**Table 4: Age Distribution of Infants in the Four Communities**  
Age of Infants (Months)

Area	Community	0-2	3-5	6-8	9-11	12-17	18-24	Total
Ogbomoso	Biuro	1	2	2	3	5	2	15
	Okin	3	4	3	-	2	2	14
Osogbo	Isale Osun	3	3	3	3	3	3	18
Iwo	Oke-Odo	2	2	2	2	2	1	11
Total		9	11	10	8	12	8	58

## Conduct of the Household Action Trials

The guides for the Household Action Trials (Annex IV) were designed to be used on three visits to the homes of target-group mothers. The purpose of the first visit was to obtain background information on the child-feeding practices of the mother. A 24-hour dietary recall for the infant was also conducted and used to assess the adequacy of the child's diet. After the initial interview with the mother, the interviewer identified the problems in the mother's feeding practices and formulated recommendations that would move the child's diet towards the ideal feeding practices for the age group.

These recommendations were discussed with the mother during a counseling visit the next day. The purpose of this visit was to provide the mother with alternative practices to improve her child's diet, to record the mother's reactions to these recommendations, and to motivate her to try one of the new practices over the next few days.

The third (follow-up) visit was scheduled for five days after the (second) counseling visit. During the follow-up visit, a second 24-hour dietary recall for the child was conducted. After this recall, the interviewer probed to find out which of the recommendations the mother had tried, her motivations for trying or her reservations/constraints for not trying. For those who had tried, the outcomes and reactions of both child and mother to the new practice were noted. The mother was asked if she would adopt the new practice, reasons for deciding either way, and if she intended to recommend it to friends and neighbors.



Analysis of the child's diet after the first 24-hour dietary recall was compared with analysis of the child's diet after the second 24-hour dietary recall, to determine whether the child met the daily energy requirement for that age group and whether or not the mother actually tried out the recommendations.

### III. FINDINGS

For each age group studied in the household action trials, the following issues were highlighted:

- ◆ Which options are mothers most willing to try?
- ◆ Which options are mothers more able to adopt and which are more difficult to implement?
- ◆ Which constraints are strongest and most resistant to change, and which motivations are most effective in promoting the recommended practices?

#### **The 0 - 2.9 Month Age Group**

Nine babies between the ages of 0 to 2.9 months were selected. All of them were healthy and well-nourished (on the basis of growth charts and physical appearance).

#### ***Ideal Feeding Pattern***

- ▶ Exclusive breastfeeding.

#### ***Diet Analysis/Feeding Problems of Selected Infants***

Initial diet analysis showed that all the infants were breastfed on demand and that the frequency of breastfeeding was on average greater than 10 times per day. Only one infant in the rural area was breastfed exclusively. Breastmilk and water were the most common components of the infants' diet. Four of them (one rural and three urban) were given glucose water, five (two rural and three urban) were given *agbo*, and four (three rural and one urban) were bottle-fed.

#### ***Options Mothers Were Most Willing to Try***

All mothers were advised to breastfeed their children exclusively for 6 months.

Seven mothers (four rural and three urban) out of nine mothers who were advised to breastfeed exclusively said they would continue to do so after the trial. One of the urban mothers refused to stop giving glucose water to her baby, her reason being that the child was not satisfied with breastmilk alone. Two urban mothers also continued to give *agbo* to their children. However, the frequency and quantity were reduced.

#### ***Motivations and Constraints to Exclusive Breastfeeding***

The benefits given by mothers who agreed to breastfeed exclusively were:

- the child's health had improved; and
- the child felt more relaxed and satisfied with breastmilk.

The constraints to exclusive breastfeeding given by two urban mothers were:

- frequent breastfeeding affected the mothers' health; and,
- the child was not satisfied with breastmilk alone.

**Table 5: Results of Household Trials in the 0-2.9 Months Age Group**  
N = 9

RECOMMENDATION	No. who were advised to try	No. who agreed to try	No. who actually tried	No. who agreed to continue recommendation
Breastfeed more frequently: on demand and at least 8-10 times per day (24 hours)	6	6	6	6
Stop giving feeds of water, glucose, milk and concoction (herbal)	9	9	9	7
Reduce frequency/amounts of feeds of water, glucose and concoction	1	1	1	1
Express breastmilk to be given to the child when mother is absent	1	-	-	-

### The 3 - 5.9 Month Age Group

For this age group, 11 infants were selected. Ten were healthy and well-nourished, while one was under-nourished.

#### *Ideal Feeding Pattern*

- ▶ Exclusive breastfeeding or introduce nutritious complementary foods.

#### *Diet Analysis/Feeding Problems of Selected Babies*

All the infants were breastfed on demand. Frequency of breastfeeding was on the average greater than 10 times a day. However, none of the infants was breastfed exclusively. Four infants (two rural and two urban) were bottle-fed while two (rural) were being force-fed. Four infants received pap made from maize, often with sugar added; one of the infants, however, had pap with milk. One child had *amala* with vegetable soup and another was given *moinmoin*. An urban infant was given *agbo*. Most of the infants were fed these weaning foods at least twice a day. The consistency of the weaning pap was watery in most cases.

#### *Options Mothers Were Most Willing to Try*

Mothers who were already breastfeeding with little or no supplementation were advised to breastfeed exclusively for at least four months. In order to improve the quality of complementary foods, other



mothers were given the option of enriching pap with soyaflour, roasted groundnut paste, crayfish, melon seed, palm oil, sugar, etc. One urban mother chose to add roasted soyaflour to her child's pap. She said the pap tasted better, and the child ate all that was given to him. One rural mother adopted enriching her child's pap with ground melon seeds, because it was cheaper and readily available. Another adopted enriching her child's pap with dried fish. One mother, however, did not try any of the recommendations because she had not been to the market to purchase any of the complements, although she said she was willing to try.

Adding oil to weaning pap is one of the most effective ways of increasing energy density. Three out of five mothers given this recommendation adopted it. The consistency of the weaning pap was watery in most cases. Five mothers were given the option of making pap thicker, and one of them adopted it. Four out of six mothers who were advised to breastfeed their children exclusively adopted the practice. These mothers reported that their infants were more relaxed and satisfied with breastmilk alone. One rural mother also reported that time was no longer wasted on pap preparation. They promised to continue breastfeeding their babies exclusively for at least four months. Two urban mothers who agreed to stop feeding their infants with pap, however, continued to give herbal concoction but not as often as before.

### *Motivations and Constraints*

The effective motivations for mothers to follow these recommendations were :

- the child liked and ate enriched pap;
- the child liked the taste of soyaflour; and,
- the child felt more relaxed and satisfied with breastmilk alone.

The only constraint reported was the inability of a mother to go out and purchase food from the market during the trial period.



**Table 6: Results of Household Trials in the 3 - 5.9 Months Age Group**  
N = 11

RECOMMENDATIONS	No. Who Were Advised to Try	No. Who Agreed to Try	No. Who Actually Tried	No. Who Agreed to Continue Recommendation
Stop giving feeds of water, concoctions, pap and milk	6	5	6	4
Sleep with the baby and breastfeed while lying down.	1	1	1	1
Use both breasts at each feed and empty breast completely by feeding longer	2	2	2	2
Reduce frequency/amount of feeds of water, milk, concoctions or pap	3	3	2	2
Breastfeed first before offering other foods	1	1	1	-
Express breastmilk for the child when absent	1	1	-	-
Feed child with cup and spoon	1	1	-	-
Enrich ogi with groundnut, crayfish, egusi, soyflour, palm oil, sugar, milk, etc.	5	4	3	3
Make pap thicker and feed using a cup and spoon	5	5	2	1
Give child locally available, affordable, nutritious foods such as <i>eko-afala</i> , <i>moin-moin</i> , mashed beans, and <i>ekuru</i> , etc.	2	1	1	1
Give mashed fruits or vegetables (banana, pawpaw, green leaves, etc.)	2	1	-	-

### The 6 - 8.9 Month Age Group

Ten infants participated in this group. Two were undernourished, and one had diarrhoea at the time of the trials. Seven infants were healthy. Only two of the infants met the daily energy requirement for this age group during the 24-hour dietary recall.



### ***Ideal Feeding Pattern***

- ▶ Frequent breastfeeding complemented by nutritious soft foods.

### ***Diet Analysis/Feeding Problems of Selected Infants***

All the infants were breastfed on demand. Frequency of breastfeeding was on the average greater than five times a day. Maize pap was the most common weaning food given, and sugar was commonly added to this pap. The consistency of the pap in most cases was watery, and most of the infants were fed three times a day (in addition to breastfeeding on demand). However, two infants were fed with pap four times a day and two others twice a day. Three infants were given small amounts of pap (i.e., less than 3/4 cup).

One infant in the urban area was fed with baby formula (Babeena). Some of the infants were already receiving small amounts of adult foods. Seven infants (three urban and four rural), were being bottle-fed.

### ***Options Mothers Were Most Willing to Try***

To improve on the above feeding patterns, the following options were most often suggested to mothers:

- give the child locally available, affordable nutritious food such as *moinmoin*, *ekuru*, mashed beans, and *eko-afala*; and,
- enrich *ogi* with groundnut, crayfish, *egusi*, soyafLOUR, palm oil, sugar, etc.

Mothers of children in this age group were less receptive to the recommendation to make pap thicker. Five mothers adopted the recommendation of enriching baby's pap, of whom four did this with roasted soyafLOUR. They mentioned that soya in pap was well tolerated by their children, and neighbors liked the aroma and color of the roasted soyafLOUR. One rural mother who adopted the soyapap complained of non-availability of soyabeans in her locality. The mothers liked the soyafLOUR, adding that the roasting method saves time. Two urban fathers did not allow their children to be fed with soya because they believe that soya causes diarrhoea.

Half of the mothers did not try or adopt the recommendations given to them. One mother mentioned that she was always in a hurry and usually did not have time for the child. One of the urban mothers continued to force-feed her child, because according to her, the child was never satisfied when fed by cup and spoon. The dietary recall conducted during the follow-up visit showed that only three infants met their daily energy requirements.

### ***Motivations and Constraints***

The effective motivations for adopting these practices were :

- the child was eating more than usual; and,
- the child looked healthy and was more active.

One of the constraints was with the recommendation of enriching pap with soyafLOUR. Some fathers discouraged their wives from using soyafLOUR, although these mothers were willing to try. Most mothers also refused to make pap thicker for their children, because they believed that the pap will be too heavy for a child's stomach.



**Table 7: Results of Household Trials in the 6 - 8.9 Months Age Group**  
N = 10

RECOMMENDATIONS	No. Who Were Advised to Try	No. Who Agreed to Try	No. Who Actually Tried	No. Who Agreed to Continue Recommendation
Give child locally-available, affordable, nutritious foods such as <i>eko-afala</i> , <i>ekuru</i> , mashed beans, and <i>moin-moin</i>	7	7	3	3
Make pap thicker (using more <i>ogi</i> paste), and feed using cup and spoon; stop over-dilution with water.	9	8	2	1
Enrich <i>ogi</i> with groundnut, crayfish, egusi, soyflour, palm oil, sugar, etc.	9	9	6	5
Give mashed fruits or vegetables (banana, pawpaw, green leaves, etc.)	6	4	-	-
Feed one extra meal or snack everyday	3	2	1	1
Increase serving by 2 spoonfuls each meal (or more if child will take more) and encourage child to eat the whole serving	2	2	1	1
Enrich foods with properly processed soya products	1	1	1	1
Sleep with child and breastfeed during the night	1	1	1	1
Breastfeed first before offering other foods	1	1	-	-
Stop giving concoction to the child	1	1	1	-

### The 9 - 11.9 Month Age Group

Of the eight infants selected within this age group, four were undernourished, and one had diarrhoea at the time of the trials.



### ***Ideal Feeding Pattern***

- ▶ Continue breastfeeding and introduce family foods.

### ***Diet Analysis/Feeding Problems of Selected Infants***

All the children were breastfed, on the average more than five times a day. Maize pap was the most common food given, often with sugar added. Four urban infants had already been introduced to nutritious adult diets. One rural child was still being given an herbal concoction, while only one urban child was given fruits. The infants were fed less than five times a day and were consuming small amounts of food. One rural child was still being force-fed occasionally. The results of the initial 24-hour dietary recall showed that none of the infants met his or her daily energy requirements.

### ***Options Mothers Were Most Willing to Try***

The recommendations were:

- give the child locally available, affordable, nutritious foods such as *eko-afala*, and *moinmoin*;
- enrich *ogi* with groundnut, crayfish, *egusi* etc.;
- give nutritious snacks such as fruits, *kulikuli*, and *akara*;
- enrich foods with properly processed soyaflour; and,
- gradually introduce family foods such as *amala* and *ewedu*, enriched *eko-afala*.

Almost all the mothers of infants in this age group tried and adopted the recommendations given to them. One mother did not try the recommendation given to her because her child was ill and therefore could not eat well. All the infants fed with nutritious family diets accepted the food well. The mothers were convinced that babies were growing well as a result of eating the nutritious family food. Most rural mothers enriched the weaning pap with *egusi* (melon seed) and groundnut because they were more readily available than soybeans. A rural mother reported that her child became more active when she was introduced to the family diet. She also agreed to make weaning pap thicker, as she believed this would make the child strong. A rural father liked the pap and roasted soya flour diet and promised to always encourage his wife to give it to his child. After counseling, most of these infants were fed four to five times a day in addition to breastfeeding and were also given nutritious snacks.

The 24-hour dietary recall conducted during the follow-up visit showed that five out of the eight infants met the daily energy requirements for their age group.

### ***Motivations and Constraints***

Concepts that motivated mothers to follow the recommendations were:

- the child looked healthier and was more active;
- the child ate well and was satisfied; and,
- the mother wanted the child to be healthy and strong.

Mothers did not report any constraints to adopting these recommendations.

**Table 8: Results of Household Trials in the 9 - 9.11 Months Age Group**  
N = 8

RECOMMENDATIONS	No. Who Were Advised to Try	No. Who Agreed to Try	No. Who Actually Tried	No. Who Agreed to Continue Recommendation
Give child locally-available, affordable, nutritious foods such as <i>eko-afala</i> , <i>moinmoin</i> , <i>ekuru</i> , yam pottage	3	3	3	3
Make pap thicker and feed using cup and spoon	2	2	2	-
Enrich pap with groundnut, egusi, palm oil, soyflour, etc.	7	6	6	6
Give nutritious snacks such as fruits (banana, orange) <i>kulikuli</i> , <i>akara</i> , and <i>ekuru</i>	4	3	3	3
Gradually introduce family foods such as <i>amala</i> and <i>ewedu</i> , enriched <i>eko-afala</i> , mashed beans, etc.	4	4	4	4
Mash family foods or alter preparations to make them suitable for feeding infants	2	1	1	1
Enrich foods with properly processed soya products	2	2	2	2
Give child plenty of stew and ingredients such as vegetables and meat with the staple food	1	1	1	1
Increase serving by 2 spoonfuls per meal and encourage child to eat all	3	1	1	1
Feed one extra meal or nutritious snack everyday	1	1	-	-

### The 12 - 17.9 Month Age Group

Twelve infants participated in this age group. Two children were undernourished and one child had diarrhoea at the time of the survey. There was only one drop-out (in the urban area) before the end of the trial.

#### *Ideal Feeding Pattern*

- Family foods, nutritious snacks plus breastfeeding.



### ***Diet Analysis/Feeding Problems of Selected Infants***

Only one of the infants (in the urban area) had already been weaned off breastmilk. Most of the infants, especially in the rural area, were still breastfed on demand, and all the infants were also eating adult foods. Although some of them were still being fed plain pap, it was of a more acceptable consistency. One of the rural mothers was still force-feeding her child. The infants were fed fewer than five times a day, and only one of them (in the rural area) was given fruit (mango) once a day. None of the infants met his or her daily energy requirement.

### ***Options Mothers Were Most Willing to Try***

The recommendations were to:

- add nutritious ingredients such as crayfish, fish, and soybean flour to the meals;
- give nutritious snacks such as fruits, *akara*, *kulikuli*;
- feed one extra meal or nutritious snack everyday;
- try different foods to encourage the child to eat; and,
- give a separate serving if the child eats from the same dish as others.

Most mothers of infants in this age group tried at least two of the recommendations given to them. One urban mother could not try any of the recommendations because the child had diarrhoea, and he was being given breastmilk, ORS, and small quantities of plain pap, while another mother in the urban area claimed that she had not been able to try due to problems at home. One of the urban mothers was not available during the follow-up visit, and all efforts made to contact her were unsuccessful. Mothers generally reported that all their children accepted the food given to them very well. The infants all liked the enriched pap and consumed more than expected. After counseling the infants, especially urban infants, were fed between four to five times a day in addition to breastmilk. Some of them were given nutritious snacks such as fruits, *akara*, biscuit, and *kulikuli*. One of the rural mothers complained that preparing roasted soyflour was time consuming, while another mother complained of financial constraints.

The 24-hour dietary recall conducted during the follow-up visit showed that only five out of the 11 infants met their daily energy requirements.

### ***Motivations and Constraints***

Motivations for accepting the recommendations were:

- the child tolerated food given and ate until satisfied; and,
- the child looked healthier and was active.

One mother complained that preparing the child's food, especially the soyflour, was time-consuming, and another complained of the cost.

**Table 9: Results of Household Trials in the 12 - 17.9 Months Age Group**  
N = 12

RECOMMENDATION	No. Who Were Advised to Try	No. Who Agreed to Try	No. Who Actually Tried	No. Who Agreed to Continue Recommendation
Add nutritious ingredients such as crayfish, fish, and soybean flour to the meals	7	7	7	7
Add palm oil to the child's serving	4	3	1	1
Give nutritious snacks such as fruits, <i>akara</i> , and <i>kulikuli</i>	9	4	4	4
Feed one extra meal or nutritious snack everyday	7	5	3	3
Make stew with beans, egg, green leaves and mix more stew with the child's staple	5	2	-	-
Try different foods to encourage child to eat	6	3	3	3
If child eats from the same dish with others, give a separate serving and watch to be sure child eats it	3	1	1	-
Increase serving by 2 spoonfuls each meal (or more) and encourage child to eat the whole serving	4	1	-	-
Introduce different types of family foods that provide a variety of nutrients	1	1	1	1
Enrich foods with properly processed soya products	1	1	1	1
Make sure child gets some of all the food in the meal, including meat	3	1	1	-

### The 18 - 24 Month Age Group

Eight infants were selected in this age group. Two of them were under-nourished.

#### *Ideal Feeding Pattern*

- ▶ Same as 12 - 17.9 month age group.



### ***Diet Analysis/Feeding Problems of Selected Infants***

Two infants in this age group were breastfed, although the frequency had been reduced. Six infants had been weaned off the breast. All the infants were eating small amounts of adult food, and a few were given snacks once a day. Only four infants (in the urban area) were being fed with pap and sugar. Most of the infants were fed three to four times a day. The 24-hour dietary recall during the initial visit showed that none of the infants met his or her daily energy requirement.

### ***Options Mothers Were Most Willing to Try:***

The recommendations were to:

- add nutritious ingredients such as crayfish, fish, and soyflour to the meal;
- feed one extra meal or nutritious snack everyday;
- increase portions by at least two spoonfuls each meal and encourage the child to eat the whole portion; and,
- give nutritious snacks such as fruits, *akara*, and *kulikuli*.

All the mothers of infants in this age group tried at least two of the recommendations given to them. Mothers were more receptive to giving extra meals to infants, so that most of them were fed four to five times a day. Also, most mothers reported that they gave nutritious snacks such as *kulikuli*, biscuits, *mosa*, *akara*, mango, and oranges to their infants at least once every day. The mothers also reported that their infants tolerated the foods and snacks very well and that they felt satisfied with their child's eating. Two urban mothers particularly mentioned that their babies liked any food enriched with roasted soyafLOUR and that they would recommend this to their friends and neighbors. Two mothers were willing to try and adopt the practice of feeding the child from a separate bowl. They reasoned that a child could still eat "communally" even when eating from a separate bowl and that the practice enables a child to eat enough without being disturbed by other children. One mother in the rural area refused to adopt this recommendation. The remaining infants ate separately.

The 24-hour dietary recall conducted during the follow-up visit showed that five infants met their daily energy requirement.

### ***Motivations and Constraints***

Motivations for accepting recommendations were:

- the child tolerated food given and ate until satisfied;
- the child liked the taste and flavor of roasted soyafLOUR; and,
- the child looked healthy and was active.

One rural mother complained of spending more on child feeding.



**Table 10: Results of Household Trials in the 18 - 24 Month Age Group**  
N = 8

RECOMMENDATIONS	No. Who Were Advised to Try	No. Who Agreed to Try	No. Who Actually Tried	No. Who Agreed to Continue Recommendation
Add nutritious ingredients such as crayfish, fish, and soyflour to the meals.	5	5	4	4
Give nutritious snacks such as fruits (banana, orange) <i>akara</i> , and <i>kulikuli</i>	6	3	2	2
Feed one extra meal or nutritious snack every day	7	5	5	5
Increase serving by 2 spoonfuls each meal (or more) and encourage child to eat whole serving	5	4	2	2
If child eats from same dish with others, give separate serving and watch to be sure child eats it	3	2	2	2
Make stew with beans, green leaves, <i>egusi</i> and mix more stew with the child's staple	3	1	-	-
Add palm oil to the child's serving	3	1	-	-
Try different foods to encourage child to eat	4	1	1	1
Give mashed fruit or vegetables (banana, pawpaw, green leaves, etc.)	1	1	1	1
Make sure the child gets some of all the foods in the meal, including meat	1	1	-	-

### Reported Beliefs and Feeding Practices

#### *Initiation of Breastfeeding and Use of Colostrum*

Information on this was obtained from mothers of infants 0 to 5.9 months age group. Two rural mothers and two urban mothers mentioned that they initiated breastfeeding one hour after delivery. They believe that breastmilk is the best feed for the child, as had been suggested to them by experienced mothers and grandmothers. Eight mothers (four rural and four urban) said they initiated breastfeeding 3-9 hours after delivery. Four mothers (one rural and three urban) reported that they initiated breastfeeding on the second day of delivery, while three mothers (two rural and one urban) initiated it on the third day. These



mothers believed that breastmilk will only flow two or three days after delivery and that initiating breastfeeding immediately after delivery would be like punishing the baby because no milk would be produced yet. Many mothers were against the initiation of breastfeeding within one hour of delivery; according to them, it is culturally unacceptable.

An urban mother believed that the physical stress that accompanies childbirth will not allow a mother to initiate breastfeeding immediately after delivery.

The majority of the mothers (six rural and eight urban) said that they gave colostrum to their infants. This was recommended to them by health workers and grandmothers. They all believe that colostrum is good for the child and will help the child grow well. Six mothers (four rural and two urban) mentioned that they did not give colostrum to their babies, because colostrum is dirty milk and can cause diarrhoea.

### ***First Food Given to Child after Delivery***

Six mothers (three rural and three urban) mentioned that breastmilk was the first food given to their infants, and this was recommended by health workers and experienced mothers. Six mothers (four rural and two urban), however, said they gave water first to their infants to quench their thirst and to welcome them into the world. This was recommended by health workers and grandmothers. Five mothers (one rural and four urban) mentioned that they were advised by health workers and doctors to give glucose water first to their newborn infants to prevent them from having fever or jaundice. Four mothers (three rural and one urban), mentioned *agbo* and *omi iye* (holy water) as the first feed given to their babies. They believe that these will clear the babies' stomachs and prevent *ile tutu* (convulsion) and *oka ori* (gaping anterior fontanelles).

### ***Planned Duration of Breastfeeding***

Information on this was obtained from all the mothers. Five mothers (three rural and two urban) stated that they will breastfeed their infants for more than two years, i.e. 30 to 36 months. Twenty-three of them (fourteen rural and nine urban) mentioned 24 months. They all believed that breastmilk is the best food for a child and that infants should have adequate amounts of it. Twenty-one mothers (nine rural and twelve urban) said they would breastfeed for 18 months, while two other rural mothers mentioned 20 and 22 months respectively. They were all of the opinion that infants would no longer need breastmilk after this age (18-22 months). One urban mother (a secondary school teacher) said she would stop breastfeeding when the child is 12 months old because the child would have had the best that breastmilk can provide within the first 12 months of life. Another urban mother mentioned that she stopped breastfeeding her child at nine months when the child was no longer "tolerating" breastmilk, and another said she stopped breastfeeding at 14 months because the child was refusing other foods.

### ***Breastfeeding Problems and Solutions***

The common breastfeeding problems experienced by nursing mothers such as sore nipples, breast abscess, and insufficient milk had not been experienced by any of the mothers interviewed at the household action trials.

Most of the mothers were relaxed while breastfeeding their infants, as observed during the interviews. Some mothers initiated breastfeeding while in other cases it was the child who initiated it. However, breastfeeding was terminated by the child in most cases. It was also observed that some mothers breastfed their infants on only one breast and that the duration of breastfeeding was usually at least 15 minutes.

### ***Age and Cue for Introduction of Complementary Food***

Six mothers (two rural and four urban) of infants under three months old said they would introduce complementary food into their infants' diet at three months. One urban mother said after 40 days, while two rural mothers mentioned five months and six months respectively. They all believed that at these



ages, the infants would no longer be satisfied on breastmilk alone. Seven mothers (four rural and three urban) said they will give plain pap to their babies since this is what they can afford. One educated urban mother, however, mentioned infant formula, while another mentioned soya *ogi*. They believe that these foods are also good for babies.

Three one rural mother and three urban mothers introduced plain pap to their infants' diet at three months. They did this because their babies always cried after breastfeeding, meaning they were no longer satisfied with breastmilk alone. Only four mothers of infants in the 3 to 5.9 months age group (one rural and three urban) said that they would introduce pap into their infants' diet when they were between 4 and 6 months of age. They felt that breastmilk would no longer be sufficient for the infants of that age.

### ***Feeding and Appetite during Childhood Illness***

Mothers reported that infants generally had good appetites when they were not ill. However, most infants lost their appetites during illness, especially when they had diarrhoea. Most infants, usually the younger ones, were found to accept only breastmilk when ill, while very few infants were reported to have refused breastmilk during illness.

A few infants, especially the older ones, were found to accept small quantities of pap when ill, while others rejected pap or other semi-solid foods. It was also discovered that most mothers force-fed their ill children. Four mothers (three rural and one urban), however, reported that their babies ate normally during illness.

### ***Sources of Information on Infant Feeding***

Grandmothers, mothers-in-law, neighbors, experienced mothers, and friends were cited by the majority of the rural mothers as their sources of information on infant feeding. They also mentioned that they get this information from nurses and doctors when they attend hospitals or clinics in town, and that there were no VHWs or TBAs in their area. In the rural communities, most mothers did not have access to radios or televisions. Only five mothers cited radio as their source of information on infant feeding. Three mothers said that although they listened to the radio occasionally, they were not aware of any programme that gave messages on child care.

Urban mothers also cited nurses and doctors as their sources of information on infant feeding. None, however, mentioned grandmothers, mothers-in-law, or neighbors. Most urban mothers had access to radios, and a few had access to television. Eighteen mothers mentioned radios as their source of information on child feeding, while six others said they listened to the radio but had never heard any programme on child feeding. Only four mothers mentioned television as their source of information. One urban mother said that she particularly enjoyed watching advertisements on infant formula.

## **IV. CONCLUSIONS**

Serious infant feeding problems that should be addressed by a nutrition education project were identified during the households trials. These include:

- discarding of colostrum;
- giving of prelacteal feeds such as *agbo* and glucose water;
- non-exclusive breastfeeding of infants between 0-4 months;
- early introduction of complementary diet;
- feeding infants with foods that are low in energy/nutrient content and in small quantities;
- use of feeding bottles; and
- rarely feeding fruits and vegetables to children.

Few mothers of infants aged 0-6 months were willing to modify current breastfeeding practices. It was particularly difficult to improve the diet of infants 6-8 months old, because they often reject weaning



foods. However, the majority of mothers of children between 9-24 months were willing and able to modify other child feeding practices affecting their children.

The trials also resulted in the identification of thirteen feeding recommendations from the thirty-seven that were specifically formulated for improving feeding practices in children between 0-24 months. These were identified as new practices that most mothers were willing to try and also continue after the household trials.

The thirteen recommendations most adopted by mothers were the following:

1. Breastfeed more frequently: on demand and at least 8-10 times per day (24 hours).
2. Stop giving feeds of water, milk, concoctions, pap or other foods/liquids.
3. Use both breasts at each feed and empty breasts completely by feeding longer.
4. Give the child locally available, affordable, nutritious foods such as *eko-afala*, *moinmoin*, mashed beans, and *ekuru*.
5. Enrich pap with groundnut, crayfish, *egusi*, soyflour, palm oil, sugar, etc.
6. Feed one extra meal or nutritious snack everyday.
7. Increase serving by two spoonfuls each meal (or more if child will take more), and encourage child to eat the whole serving.
8. Gradually introduce family foods such as *amala* plus *ewedu*, *moinmoin*, and rice and beans.
9. Enrich foods with properly processed soya products.
10. If the child eats from same dish as others, give him or her a separate serving and watch to be sure he or she eats it.
11. Add nutritious ingredients to the meal such as crayfish, fish, and soyflour.
12. Try different foods to encourage child to eat.
13. Give nutritious snacks such as fruits (banana, orange) *kulikuli*, *akara*, *ekuru*.

It is envisaged that these recommendations will be appropriate for promotion on a wider scale and will have the potential of improving infant and young child health.

The strongest motivation for improving infant and young child feeding, as reported by caretakers, was their ability to promote children's appetite and good health. The calorie content of infants' diets was calculated using the Food Composition Table for Use in Africa. Their daily energy intake was estimated using the 1985 FAO/UNO/WHO recommendations.



**Table 11: 1985 FAO/UNO/WHO Recommendations for the Daily Energy Intake of Infants**

Age Group (Months)	Approximate Weight (Kg)*	Energy Requirement (Kcal/kg)	Total Energy (kcal/day)	Energy from Breastmilk (kcal/day)**	Remainder (obtained from other foods (kcal/day)
6 - 8	8	95	800	400	400
9 - 11	9	100	900	400	500
12 - 23	11.5	100	1150	350	800

\* Weights are estimated as slightly lower than international averages.

\*\* Breastmilk estimates assume frequent breastfeeding, on demand.

For children under 6 months old, it is assumed that breastmilk alone provides adequate energy. Half of the infants (6-24 months old) met the daily energy requirement after the counseling visit, as compared with only two infants (6-8.9 age group) who met the requirements during the initial visit.

The following verbatim quotations from mothers expressed the positive outcomes of the recommendations:

- ▶ "O im se dada" (the child thrives well)
- ▶ "O je gbogbo re tan" (the child ate all that was given)
- ▶ "Ara re bale dada" (the child is very well)
- ▶ "O n sere dada" (the child is more active)

Mothers experienced very few constraints in adopting the recommendations. Most often, these constraints were related to the father's refusal to purchase recommended new ingredients for weaning pap, such as soybean flour, or to the unavailability of soybeans in some rural areas. Some mothers also complained of financial problems. Mothers of infants 4-8 months old refused to make child's pap thicker because they believed that it would be too heavy for the child's stomach.

Mothers reported that they trusted information on child feeding obtained from nurses, doctors and nutrition education programmes broadcast on radio and television. Rural mothers also cited individuals such as grandmothers, mothers-in-law and experienced mothers as their sources of information. Lack of electricity in the rural area limits opportunities to use radio and television. In contrast, most of the urban dwellers interviewed had access to radios. Almost all the mothers indicated that they were not aware of the existence of Village Health Workers and Community Based Distribution Agents. Therefore, messages and IEC materials should be disseminated through health care providers, including retrained VHWs/TBAs and CBDs, and through radio. Health care providers should be encouraged to counsel mothers at every opportunity on recommended changes, e.g. frequency of breastfeeding, giving of colostrum, duration of breastfeeding, etc.

Most mothers believe that weaning foods should be liquid (and hence closer to breastmilk). This may mean that diluting thickened pap with oil as a substitute for water might be accepted by mothers, although children in the study were not fond of the taste of palm oil.

Gradual introduction of family foods was accepted and practiced by all mothers of infants 9-24 months to whom it was recommended. It is easier to give part of the family food than to prepare special meals for children of this age.



## V. RECOMMENDATIONS

Based on all the findings, the following are recommended:

- ◆ Giving of prelacteal feeds such as *agbo*, water and glucose water to babies should be discouraged. Mothers should be encouraged to offer breastmilk for the same reasons they give other foods, such as to stop baby crying, lubricate the throat or clear the gut.
- ◆ Mothers should be given adequate information on the importance and advantages of colostrum to their babies.
- ◆ Mothers should be taught proper infant feeding practices which should include:
  - ▶ When weaning should begin
  - ▶ How to introduce complementary foods
  - ▶ How to prepare nutritious meals for infants using locally available staple foods.
  - ▶ The type of complementary foods to give infants at a particular age.
  - ▶ Feeding of children during illness.
- ◆ The different categories of health workers (nurses, doctors, VHWs/TBAs, CBDs, CHEWs) still require intensive training on proper infant feeding, particularly breastfeeding, since these groups of people are the readily available sources of information on infant feeding for mothers. Radio should be used as a means of communicating nutrition education messages in urban areas.
- ◆ Since a variety of foods for enriching pap are available in the communities, mothers should be encouraged to use this variety to improve the nutrient quality of complementary foods.
- ◆ The importance of nutrients in fruits and vegetables for children over 6 months should be emphasized in counseling. Although this study did not probe mothers' association of these foods with worm infestations, the issue must be addressed during counseling. Fruits are not available seasonally and mothers will find it easier and cheaper to obtain these fruits in season. Mother should be taught that one fruit per day is sufficient.



### PART 4: IDEAS ON MESSAGE STRATEGY

Based on insights from the literature review and from the qualitative research, the following preliminary ideas for a message strategy for mothers are presented for consideration, discussion, and refinement.

Behavioral Objective	Current Situation	Constraints to Overcome	Message Content
Initiate breastfeeding within 1 hour of giving birth	Few mothers initiate so soon; some later on birth day and others during next 2 days	Mothers see no reason to initiate so early because milk not yet flowing; many mothers would consider "culturally unacceptable"; others feel mother needs time to recover from delivery	Mothers need to know multiple advantages of early initiation; message needs to address <u>why</u> it is culturally unacceptable (if this is known)
Give colostrum to newborns	Mothers reached by BMC do feed colostrum, but other traditional mothers consider it to be dirty, to contain germs, to cause diarrhoea; they discard it	Traditional negative attitudes of mothers and grandmothers, even shared by some health workers	Messages should try to transfer to colostrum the positive attributes given to glucose water and agbo (cleanse stomach and protect against disease); some mothers also feel colostrum helps the baby grow well; use medical authority.



Behavioral Objective	Current Situation	Constraints to Overcome	Message Content
<p>Give your baby breastmilk only for the first 5-6 months, i.e., don't give agbo, water, and glucose water to young babies</p>	<p>Most rural and urban mothers give these things occasionally or regularly (all 20 mothers of babies &lt;6 months in trials gave at least one of these supplements); more a problem in urban areas</p>	<p>Many mothers lack confidence that they produce enough breastmilk to satisfy the baby's hunger &amp;/or provide enough water; some mothers feel they have insufficient milk because babies cry. Common belief that these supplements needed for babies' growth and development; agbo cleanses the stomach and prevents disease; glucose water prevents jaundice; strong belief in urban areas that breastfeeding not compatible with work.</p>	<p>The many resistances should be overcome through a combination of medical authority and radio dialogues that introduce and show falsity of common beliefs; the good image of breastfeeding and "Ase Oluwa ni" should also be used. Mothers in trials claimed that cutting these supplements made babies more relaxed and satisfied. Common theme of messages should be that breastmilk makes babies ACTIVE, POWERFUL, SATISFIED. Need message that baby's crying may indicate it needs to be burped or wants more milk, not that it wants to stop nursing.</p>
<p>Mothers whose work separates them from their babies should express breastmilk</p>	<p>Few if any mothers regularly express breastmilk to be fed to baby while they are away</p>	<p>Prevalent and strong belief that expressed milk will become sour, watery, and causes diarrhoea</p>	<p>Need medical authority to give facts on value and storage of expressed milk; need testimonials from successful mothers; a more important message in urban areas</p>
<p>Mothers who suffer from such problems as cracked or sore nipples, breast engorgement, or sores on the breast should consult with a doctor, nurse, or VHW who can give useful advice</p>	<p>Some mothers suffer from these problems and probably try traditional solutions (not really explored in the research)</p>	<p>The main constraints would be the time and cost of a consultation for urban mothers, and the time, distance, and cost for some rural mothers</p>	<p>In addition to the basic message, the program might develop simple pictorials for handling each problem that health workers can use for counseling and mothers can take home afterwards</p>



Behavioral Objective	Current Situation	Constraints to Overcome	Message Content
Mothers of babies under 6 months who feel they have "insufficient milk" for their baby should try breastfeeding more often, for longer and with both breasts each time; they may also consult with a doctor, nurse, or VHW because the problem may be the baby's position when sucking	This seems to be a fairly common problem, particularly in urban areas where breastfeeding frequency may be less and earlier supplementation more common	Mothers and health workers lack understanding of the causes of insufficient milk (need for more sucking time and poor positioning); mothers may stop feeds too soon because they think baby is satisfied.	Messages should explain causes of problem and basic solution (more time at breasts); also urge consultation if problem persists; health workers need training on this; program might also develop pictorial showing proper positions
Feed your baby as much as he or she will eat when he or she is ill -- breastmilk and (older babies) enriched pap or other recommended foods. Be persistent, but do not force-feed sick babies.	Most mothers do appear to encourage continued eating during illness but not all. Many force-feed their sick babies.	A minority of mothers cut out some foods in hope child will recover sooner.	Messages should repeat need for continued feeding during diarrhea or other illness; complete safety of breastmilk; and dangers of force-feeding. They should also encourage patience, which pays off in the long run with a healthier child.
When giving food in addition to breastmilk, always use a cup and spoon never a bottle	Bottles are not common in rural areas but more common in urban (4 of 9 infants <2.9 months, 4 of 11 infants 3-5.9 months, and 7 of 10 infants 6-8.9 months were bottle-fed)	Being able to feed baby by bottle may be seen as rich, middle-class image, although this was not probed	Message should emphasize dangers of bottle feeding as well as cost and the child's need for food that is not liquid
Don't give artificial milk to any baby	Seems rare for young babies in rural areas but more common in city, even for babies of 3 months	Mothers' work responsibilities, belief that breastmilk alone insufficient to satisfy child's hunger; mother's ill health	Messages should address resistances, high cost of formula, dangers of formula; also, subtly, the lazy, selfish image of a mother who doesn't breastfeed her young baby



Behavioral Objective	Current Situation	Constraints to Overcome	Message Content
<p><i>Mothers of babies 5-6 months old:</i> continue breastfeeding on demand, then feed enriched, power pap (with soya flour, melon seed, palm oil, dried fish, etc.) at least twice daily; power pap should not be too watery; introduce first foods besides breastmilk gradually to let baby get accustomed slowly</p>	<p>Most mothers say should supplement at 5-6 months but in practice supplement earlier; most feed very thin pap; some mothers enrich it but mostly with sugar and in rural areas with soya milk, eggs, or kulikuli</p>	<p>There is a very strong belief that babies cannot digest thick food (trials had little success in overcoming this); some think soya causes diarrhoea; lack of time for preparation; lack of money; seasonal availability of some foods</p>	<p>Messages must give specific recommendations on enriching with oil, high-protein foods (cheap and available); might use testimonials to convince that babies can eat thicker foods; emphasize adding things and making pap a little thicker; appeals are that pap tastes better and is more nutritious; also that most babies this age don't get enough healthy food</p>
<p>Continue breastfeeding after sexual relationship is resumed; request appropriate family planning advice within first months after delivery</p>	<p>Fathers and grandmothers encourage mothers to stop breastfeeding once sexual relationship is resumed and or mother becomes pregnant</p>	<p>Traditional taboos against continuing breastfeeding; even some health workers agree</p>	<p>Messages should explain the relationship among breastfeeding, sexual relations, and pregnancy; give testimonials of mothers who continued</p>
<p><i>Mothers of babies 6-12 months:</i> continue breastfeeding on demand (at least 8 times a day), then give thick, enriched pap; locally available, soft, nutritious foods such as eko-afala, ekuru, mashed beans, moinmoin; mashed fruits and vegetables; and enriched ogi; at least 4 times a day; as babies get closer to their first birthday, gradually add family food; give baby own bowl</p>	<p>Mothers still breastfeed these babies well but give many non-nutritious supplements; many of these babies are undernourished; communal eating leads to inadequate consumption by infants</p>	<p>Strong resistance to thick pap; some feel soya causes diarrhea; likely beliefs against fruits and vegetables (probably considered hard to digest)</p>	<p>Messages must give specific recommendations on enriching with oil, high-protein foods (cheap and available); might use testimonials to convince that babies can eat thicker foods; if resistance to thicken proves too strong, messages may need to emphasize increasing the number of daily feeds; appeals are that child will eat more and be more satisfied; will also be healthier and more active; also that most babies this age don't get enough healthy food</p>



Behavioral Objective	Current Situation	Constraints to Overcome	Message Content
<i>Mothers of babies 1-2 years old:</i> Continue breastfeeding on demand (at least 8 times a day); give nutritious family food in child's own bowl at least 5 times a day; give healthy snacks such as kulikuli, biscuits, mosa, akara, mango, and oranges; give baby own bowl	Most mothers are still breast-feeding but some not sufficiently; need to feed more nutritious additional foods more often; communal eating leads to inadequate consumption by infants	Probably relatively minor resistances to extra time and expense involved; mother may not think young children can eat more	Messages must give specific recommendations on which foods, quantities and frequency; appeals are that child will eat more and be more satisfied; will also be healthier and more active; also that most babies this age don't get enough healthy food

On the basis of this qualitative study, grandmothers and fathers do appear to have important influences regarding child feeding. Grandmothers actually feed the supplemental foods in many cases, and fathers claim to be involved in decisions on child feeding and on care of sick children, even if they do not play an active role in actually caring for the children.

The study indicates, however, that the knowledge and attitudes of grandmothers and fathers are very similar to those of mothers. Therefore, while any radio messages and interpersonal materials should address grandmothers and fathers, a separate communication strategy that addresses their own particular resistances to the desirable practices does not appear to be necessary. Messages for fathers should refer to their strong sense of responsibility for the family's and child's food and well-being and their desire to have a happy home with a cooperative relationship with their wives. Fathers appear to feel quite strongly that breastfeeding strengthens the mother-child bond, so this should also be mentioned. Grandmothers' feelings about breastfeeding and child feeding appear to be extremely similar to mothers'. If health workers have opportunities to talk to them separately from mothers, they should take them, using the same basic messages, appeals, and motivations as for mothers.



**ANNEX I**

**SUMMARY OF FINDINGS AND RECOMMENDATIONS  
FROM THE LITERATURE REVIEW**



## ANNEX I

### SUMMARY OF FINDINGS AND RECOMMENDATIONS FROM THE LITERATURE REVIEW

Interest in infant feeding in Nigeria has generated a substantial number of research studies, primarily surveys of knowledge, attitudes and practices, and this literature provides a descriptive overview of common practices. However, there has been relatively little use of in-depth qualitative and observational methods. As a result, the detailed information needed to understand the perceptions, motivations and constraints that underlie these practices is lacking. Differences in rural and urban settings have been described, but few studies have investigated feeding practices *across* regions and ethnic groups in the country, and the majority of studies focus on Yoruba areas.

In order to develop effective strategies to motivate improved infant and young child feeding, there is a need for qualitative research with mothers, family members and health workers. Generally, formative research intended to guide communication efforts on child feeding needs to address the reasons why certain behaviors are adopted or sustained, the barriers to changing behavior, the people who play a role in influencing decisions about feeding, and the perceived problems and successful outcomes associated with various approaches to child feeding. Based on the gaps in our current knowledge of child feeding in Nigeria, a number of specific questions can be identified for further study. The key issues related to infant and young child feeding are summarized below, with particular emphasis on aspects that could be clarified with focused qualitative and observational research.

#### KEY ISSUES RELATED TO BREASTFEEDING

It is clear that current breastfeeding practices in Nigeria are far from optimal. Many mothers discard colostrum, initiate breastfeeding 24 hours or more after delivery, fail to breastfeed exclusively for any significant period, provide many feeds of water, and use milk supplements and feeding bottles in the first few months. On the other hand, most mothers do breastfeed and regard breastfeeding as important for the health of the baby. Rural mothers in particular breastfeed frequently and continue for one to two years.

Women generally expressed positive attitudes and appropriate knowledge about breastfeeding, but their practices often differed. An important objective for formative research would be to probe into underlying beliefs and images related to breastfeeding that are apparently shaping behavior. This may best be done using projective techniques rather than the direct questions that are likely to elicit socially-acceptable "breast is best" responses. Further probing into the perceived disadvantages of breastfeeding will be necessary to identify true constraints to behavior change. The views of not only mothers but also fathers and other influential people will be important here. Information is lacking on the attitudes of health workers, for example.

There are many issues related to breastfeeding that have not been adequately investigated and will need to be addressed during formative research. For example, detailed information is lacking on patterns of breastfeeding such as frequency of feeding, time at breast, who initiates and terminates each feed, and practices of women working outside the home. Belief in the need for supplementation indicates that mothers feel breastmilk is not enough for their children, but the reasons why are not well understood. It is also not clear who mothers consult when they have difficulties or concerns about breastfeeding, what advice they are likely to receive, and what problems are most common or of greatest concern.

A number of studies provided clues but not detailed information on the complexity of mothers' feelings about breastfeeding. The sense that breastfeeding is not compatible with the stresses of urban life, the issues related to embarrassment and sexuality, and the association of breastfeeding with feelings of



maternal competence all need to be investigated to understand how these perceptions will constrain or contribute to efforts to promote breastfeeding.

### **KEY ISSUES RELATED TO SUPPLEMENTARY AND COMPLEMENTARY FEEDING**

The widespread use of supplementary milk feedings is a major programmatic issue and is likely related to the image of breastmilk relative to images promoted in formula advertisements. Again, better understanding of these motivations is needed. For example, what specific benefits do mothers believe formula provides for their children? How is this linked to nourishment, health, development, satisfaction and status? What disadvantages do they perceive?

The most common complementary food is a semi-liquid cereal pap that is of poor nutritional quality and yet very highly regarded within the culture. Clearer understanding of the positive qualities of pap, such as "lightness", will provide important clues to the concepts that should be used to promote improved child feeding. Recommendations to improve child feeding in the home are likely to involve suggestions to fortify pap with additional ingredients, so it will be important to obtain mothers' (and other family members') opinions on what options are feasible and acceptable, likely through household trials of the recommended new practices.

Depending on a variety of factors, semi-solid foods are often introduced either too early or too late, indicating a need to target advice carefully to different groups or regions of the country. More information is needed on motivations and constraints for introducing foods at the appropriate time and these practices will apparently differ by ethnic group. Perceptions of the nature of the transition from breastmilk to complementary foods need further investigation, given their impact on the timing, types, and amounts of foods added to the child's diet.

The solid foods introduced after pap are more nutritious, although they tend to be high in dietary bulk and are introduced relatively late. Observational data are needed on frequency and size of servings, as well as on methods and ingredients used in preparation. Understanding of attitudinal barriers to earlier introduction of solid foods, including ethnic and rural/urban differences and the role of perceptions of health and developmental cues, will inform program development. The ethnographic studies reviewed on perceptions of child health, "lightness," and the role of feeding in moral training have all been on Yoruba samples. These issues need further clarification, and should be investigated among different ethnic groups and other relevant segments of the population.

It is clear from this review that a great deal of meaningful research has been conducted on infant and young child feeding practices in Nigeria, and yet there are a number of crucial issues that require further investigation. It is hoped that the wealth of information currently available can be used to direct future research to the questions most relevant to planning and implementing programs that will be effective in improving child nutrition and promoting the health and well-being of Nigerian children.

Source: "Infant and Young Child Feeding Practices in Nigeria: A Review of the Literature," prepared by Katherine L. Dickin, The Manoff Group, Inc., January 31, 1995.



**ANNEX II**  
**GUIDELINES FOR FOCUS GROUP DISCUSSIONS**



**ANNEX II:  
GUIDELINES FOR FOCUS GROUP DISCUSSIONS**

**FOCUS GROUP INTRODUCTION**

We are grateful that you were kind enough to come and help us in this project. We are working on a project about child health in Nigeria. We would like to know your experiences and thoughts to help other families. After we have finished, we will tell you more about the project.

We would like to talk to you today about your children, especially when they are young. There are no right or wrong answers to any of the questions since it is not a test or examination. It is your candid opinion that matters most to us. Please feel free to state your views. This discussion will take about one hour. As we will be discussing many things among ourselves, it will be important that we talk one at a time so that we can all hear each other.

We will be taking notes so that we can remember your comments. We would also like to have your permission to record the discussions on a tape recorder. The tape would only be used to make sure that our written notes are complete. Do you have any questions?

My name is ..... and my colleagues are ..... and ..... Now we would like to know your names and since I want to remember your names while we are talking I am going to write it down. Tell us how many children you have and the age of the youngest. Can we start here? Your name is .....

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## DISCUSSION GUIDE FOR MOTHERS OF INFANTS, 2 YEARS OLD

### 1. **Motherhood (to establish emotional pulls)**

As you all have young children, can you say something about how your child makes you feel?

Do they make you feel happy, proud, tired? Why? What are your dreams and aspirations for your child? How do you hope to achieve those dreams for your child?

### 2. **Good Mother**

There are many things your children do that makes you happy. Now I would like to shift to you, the mother. These are some pictures of women here in Nigeria.

Which one of these women do you believe is a good mother?

Probes:

How can you tell?

What is it about her?

How would she care for her child?

Why are others not good mothers?

### 3. **Necessities for Children of Different Ages**

Among us we have mothers with children of many different ages. Think of your youngest child and tell us: What was important for your baby right after birth?

What was important for your baby during the first month?

What about in the next months up to six months?

### 4. **Child Feeding Decisions**

Some of you mentioned breastmilk as important for a baby.

Who has breastfed their youngest child? Why did you breastfeed/why did you prefer breastfeeding?

What are the advantages of breastfeeding?

What are the problems with giving other milks?

Who has influenced your decision to breastfeed?



5. **No Breastfeeding**

Is there any one of you who did not breastfeed her baby?

Probe if any: Why didn't you breastfeed? Did anyone advise you not to breastfeed. (or if everyone breastfed) why might a mother not breastfeed?

6. **Use of Other Milks**

Earlier, some of you mentioned that young babies need milks other than breastmilk. Who among you is giving other milk to your youngest child?

Why did you decide to do this?

7. **Pictures of Women (Displayed)**

Many of you have received advice about how to feed your child. Please look at the photographs I showed you earlier. Which of these women looks like she could have given you advice?

8. **Attitude/Images of Breastfeeding and Bottle-Feeding (Display Pictures of Women)**

Please look again at the photographs.

Who do you think would have breastfed her child and not used a bottle?

Would she give anything else besides breastmilk? What? Why?

Who do you think would be using a bottle? Why? Why not others?

9. **Neighbourhood Woman**

Which of these women could possibly live in your neighbourhood? Let's say this woman who lives in your neighbourhood had a child of one month. She has been breastfeeding her baby, but now came to you for advice on what to do next. What would you recommend?

10. **Children's Pictures (Displayed)**

Please look at these three children.

What do you think of them?

How do you think they are fed?

What make you feel that this child looks like this?



11. **Breastfeeding/Bottle-Feeding Problems**

Finally, I would like to ask you if you have heard of any problems associated with breastfeeding?

What are those problems?

How can one overcome them?

What about bottle-feeding?

What are those problems?

How can one overcome them?

12. **Lactation and Pregnancy**

Did you get pregnant while breastfeeding?

How soon after the previous birth?

Did you stop breastfeeding the child when you became pregnant?

If yes, why did you stop breastfeeding?

13. **Family Planning**

Is it good to become pregnant soon? If not, how can you avoid getting pregnant too soon?

**THANK YOU VERY MUCH FOR TAKING THE TIME TO TALK WITH US.  
NOW DO YOU HAVE ANY QUESTION YOU WOULD LIKE TO ASK?  
I AM NOT SURE I WILL BE ABLE TO ANSWER THEM ALL, BUT  
I WILL TRY.**



**DISCUSSION GUIDE FOR FATHERS OF INFANTS < 2 YEARS OLD**

**1. Child's Health**

I want to talk to you about the health of your children, most especially your youngest child. What do you think about the health of your youngest child?

How do you try to keep the child healthy?

**2. Fatherhood**

All of you have a young child, can you say something about how this child makes you feel?

Do they make you feel happy, proud, tired? Why?

What are your dreams and aspirations for your child?

How do you hope to achieve those dreams for your child?

**3. Role in Child Care**

Are you involved in the care of the young children?

What do you do?

Are you involved in any activity related to feeding the child?

What is your involvement?

**4. Influence on Mother**

Some of you have mentioned giving advice to your wives on feeding the child, what is the effect of that advice?

**5. Pictures of Children (Displayed)**

Look at these pictures and describe how you think each child was fed?

**6. Breastfeeding and Bottle Feeding Problems**

I would like to ask if you have heard of any problems associated with breastfeeding? What are those problems? What can be done to overcome them?

Some people are of the opinion that the wife cannot have relations with her husband while breastfeeding? What is your own opinion?

Any problems with bottle feeding?



What are those problems? What can be done to overcome them?

You Have told us many things about child feeding. Would you encourage your wife to breastfeed? Why or why not?

Would you encourage her to exclusively breastfeed or to combine it with bottle?

Who would you go to for advice on feeding your baby? Where can you or your wife get good information?

7. **Pictures of Men (Displayed)**

Please look at these pictures and choose one that looks as if he would be a good father.

Probes:

Why did you choose him? What is it about him?

What would he do for the child? Why?

What would he advise him wife to do? Why?

What about the child's feeding?

Which among them do you think is not a good father?

Why not? What would he do?

8. **Pictures of Women (Displayed)**

Please look at these pictures.

Who do you think is a good mother?

Probes:

Why do you think she is a good mother?

How would she care for her child?

What about the child's feeding?

Which of them look as though she will not be so good?

Why? What will she do?

Which of these women would breastfeed? Why?

Which would give bottles? why?

9. **Child Feeding Decisions**



Did your wife breastfeed the youngest child? Why?

What do you think about it?

Did she give bottles? Why?

Who makes these decisions?

How do you feel when you see your wife breastfeeding?

**THANK YOU VERY MUCH FOR TAKING THE TIME TO TALK WITH US.  
NOW DO YOU HAVE ANY QUESTION YOU WOULD LIKE TO ASK?  
I AM NOT SURE I WILL BE ABLE TO ANSWER THEM ALL,  
BUT I WILL TRY.**



## Discussion Guide for Grandmothers of Infants < 2 Years Old

### 1. Grandchild's Health

You all have grandchildren who are close to you in the house. Can you tell us what you think about the health of your grandchildren or grandchild. Compare with your own children?

Do you feel that feeding of the child affects health?

Why?

### 2. Grandmother's Role in Caring for Grandchild.

You all have at least one grand child in the house. Are you involved in the care of the child? What do you do?

Probes:

What is your role in the child's feeding?

What are the different ways you feed the child when the mother is absent?

### 3. Knowledge of Current and Past Feeding Practices and Influences

Some of you have mentioned that you help feed your grandchildren. Please think back to when you fed your own child. Let's discuss how feeding has changed over time.

Probes:

What are the general changes in breastfeeding? Reasons?

Are they good or bad changes?

Who influenced you during your time?

Who influences your daughter-in-law/daughters?

Let's begin with the period immediately following birth.

What was the first thing you gave to your children?

Did you give colostrum?

Did you breastfeed immediately after birth?

What did you give to your children during the first six months?



4. **Motivations for Change**

When and why would a mother change how she feeds her child?

5. **Influence on Daughter-In-Law**

You have mentioned some differences between how you fed your children and how your daughters-in-law are feeding their children.

Do you believe it is your place to advise them on how to feed your grandchildren?

6. **Children's Pictures (Displayed)**

Now, I want to show you some pictures of Nigerian children. Please look at the pictures.

How does the child seem to you?

Now let's discuss how you believe each child is fed.

7. **Breastfeeding and Bottle-Feeding Problems**

I would like to ask you if you have heard of any problems associated with breastfeeding?

What are those problems?

What can be done to overcome them?

What about bottle feeding?

What are those problems? What can be done to overcome them?

8. **Contraceptive Effect**

Do women get pregnant when they are breastfeeding?

What do you think about this?

**THANK YOU VERY MUCH FOR TAKING THE TIME TO TALK WITH US.  
NOW DO YOU HAVE ANY QUESTION YOU WOULD LIKE TO ASK?  
I AM NOT SURE I WILL BE ABLE TO ANSWER THEM ALL, BUT I WILL TRY.**



**ANNEX III**

**INTERVIEW GUIDE FOR VHWS/TBAs, CBDs, AND CHEWs**

**ANNEX III****INTERVIEW GUIDE FOR VHWS/TBAs, CBDs, AND CHEWs****INTRODUCTION**

I am working on a project which is mainly concerned with infant health and nutrition in Nigeria. I believe you are a most resourceful person in this regard, because you see many young children, and talk to their mothers. I would appreciate it if you would talk with me. It won't take much of your time (about one hour).

**IDENTIFICATION (Health Workers)**

Type of Worker

How long have you been working here?

Are you married?

If yes,

How many children do you have?

What is the age of your youngest child?

**Please tell me about your work in this program:**

What are your main responsibilities?

What activities do you prefer? Why?

**Newborns**

Q.1 Do you deliver babies? (If No, go to Q.4)

Q.2 How many babies have you delivered in the past month?

Q.3 What was the first thing these newborns were given by mouth?

a. Did you recommend it?

b. If No, what did you recommend?

c. Did the family/mother follow your recommendation?

d. Why/Why not?

Q.4 If worker has children: Did you breastfeed your own children?

**Breastfeeding Practices of Women in the Community**

Q.5 For mothers who breastfeed their newborns, how soon after delivery do (would) you advise that they begin breastfeeding?

a. Why?

b. Do they follow your advice?

c. Why or why not?



- Q.6 In your experience, do mothers give colostrum to their children?
- If No, For how long and how much of it do they throw away?
  - What is your opinion of colostrum?
  - Do you discuss colostrum with the women you see?
  - What do (would) you say?
  - Do they follow your advice about colostrum?

**Breastfeeding Practices of Mothers with Babies in the First 4 Months of Life**

- Q.7 How often per day do mothers usually put the infant to the breast?
- In your opinion, is this frequency right?
  - If No; Then what should it be?
  - Do mothers have problems feeding this many times?
  - What are the problems?
- Q.8 What do mothers do when they can't feed as frequently as they like, because they have to be away from the child for some hours? Why?
- What do (would) you recommend?
- Q.9 Do the mothers here usually sleep with the baby and breastfeed during the night?
- What is your opinion of this practice?
- Q.10 What does exclusive breastfeeding mean?
- Does any mother give only breastmilk to their young babies? (that is, no water, milk, pap, etc.)
  - What is your opinion about this practice (breastfeeding exclusively)?
  - If opinion is positive: How long do you believe a baby could receive only breastmilk?
- Q.11 What is your opinion about water or other drinks for young babies less than 4 months old?
- Do (would) you ever recommend giving water?
  - If yes, when, why and what is the mother's reaction?
- Q.12 Do breastfeeding mothers have any problems or complaints about breastfeeding?
- If yes, what are they, what do (would) you recommend and what is the mother's reaction?  
If the worker does not mention insufficient milk as a problem, ask:
  - Does any mother ever complain about not having enough milk for their baby?
  - If yes, What do (would) you recommend?
  - How do the mothers react to this advice?
- Q.13 What is the usual age of infants when mothers stop breastfeeding?
- What are the mothers' usual reasons for stopping breastfeeding?
- Q.14 In your opinion, what is the right age to stop breastfeeding? Why?



- a. If she breastfed her children, ask: For how long did your breastfeed?

**Infant Feeding that is Not Breastfeeding**

Q.15 Are there conditions that would prevent a baby from breastfeeding or being breastfed?

- a. If yes, what are they?  
(Probes: mothers' and child's condition)

Q.16 What is your opinion about formula or other milk for young babies less than 4 months old?

- a. Do (would) you ever recommend this?
- b. If yes, when, why and what is (would be) the reaction of the mother?

Q.17 What is your opinion about the use of bottles for feeding any fluid to the young baby less than 4 months old?

- a. Do (would) you ever recommend bottles?
- b. If yes, when, why and what is (would be) the reaction of the mother?

**Assessment of Knowledge, Attitude and Practice of Health Worker Regarding Infant Feeding.**

Q.18 Does anybody ever come to you with questions about child feeding?

- a. If yes, who, and what do they ask?
- b. How often are you asked about child feeding?

Q.19 When you give advice on infant feeding, do you usually speak directly to the mother or do you also speak to the father, mother-in-law, grandmother?

- a. Why?



- Q.20 When you give advice to a mother, do you think she talks to others about it before following it?
- a. If yes, who, and why?

#### **Feeding of Infants > 4 months**

- Q.21 Besides breastmilk and milk of formula, what are the foods usually added first to the child's diet?
- a. Probe for ingredients, especially for pap.  
 b. At what age do most mothers first give these foods?  
 c. Is this what you would recommend?  
 d. Why or why not?
- Q.22 After these first foods (pap or other semi-solids) What other foods do mothers add to the child's diet?  
 When and why?
- a. Would you recommend anything different?  
 What and why?

#### **Feeding during Child/Mother Illness**

- Q.23 I would like to know if you think there should be any changes in feeding a baby who is ill?
- a. How should the baby be fed during diarrhoea or respiratory illness?
- Q.24 When the mother is ill: What do you recommend about breastfeeding?  
 Why?

#### **Mothers Diet during Lactation**

- Q.25 How much do mothers usually eat after delivery?
- a. Do you talk to women about their diet?  
 b. What do (would) you say to them?  
 c. Do the mothers feel they can follow your advice?  
 d. Why/Why not?
- Q.26 How much fluid do mothers usually drink, following the birth of their child? (Probe: while breastfeeding)
- a. Do you talk to women about how much they should drink?  
 b. What do (would) you say to them?  
 c. Do mothers feel they can follow the advice?  
 d. Why/Why not?

#### **Breastfeeding, Sex and Contraception**

- Q.27 Do mothers ever ask you about family planning?



- a. About how many months after delivery do they usually ask?
- b. What do (would) you advise them to do?
- c. Do (would) you recommend any particular methods?  
If yes: Which methods?

Q.28 Do mothers continue to breastfeed after starting to use family planning methods?  
Why or why not?

(Probe on abstinence: if yes, does that mean the mothers feel it is okay to resume relations while still breastfeeding?)

Q.29 Do mothers complain or ask about not seeing their period after delivery?

- a. What do (would) you tell them about it?  
(Probe on knowledge of post-partum amenorrhea, relationship of exclusive breastfeeding and child spacing).

### **Role of Health Workers in Giving Nutrition Advice**

Q.30 How would you feel about being asked to counsel mothers on infant feeding as part of your work?

Q.31 How many hours a week do you spend on your work in this project?

- a. How many hours a week could you spend on counselling on infant nutrition?

Q.32 What would you need to help you to be able to do this work?  
(Probe for training, educational materials, incentives)

Q.33 Do you foresee any problems in doing this work?

- a. If yes, what problems?
- b. Can you suggest any ways to overcome these problems?

**THANK YOU FOR YOUR TIME AND COOPERATION.  
NOW DO YOU HAVE ANY ADDITIONAL QUESTIONS YOU WILL LIKE TO ASK  
OR ADDITIONAL COMMENTS YOU WILL LIKE TO MAKE.**



**ANNEX IV**  
**GUIDES FOR HOUSEHOLD VISITS**





- 4a. If yes: Frequency? Day \_\_\_\_\_ Night \_\_\_\_\_  
(estimate number of times)
- On demand? Day \_\_\_\_\_ Night \_\_\_\_\_ (Y/N)
- Until when does she plan to continue?  
\_\_\_\_\_ (child's age in months)
- 4b. If no: Ever breastfed? \_\_\_\_\_ (Y/N)
- 4c. If yes: When did she stop? \_\_\_\_\_ months
- Why?
- 4d. If never breastfed: Why not?

#### **BREASTFEEDING OBSERVATION:**

If mother breastfeeds during the interview, observe her and the child and make notes on breastfeeding style. For example, include points such as the following:

- Does the mother seem relaxed about breastfeeding?
- Does she feed from both breasts?
- Does she begin the next breastfeed with the other breast?
- Who initiates and ends the feeding: the mother or the child?
- Does the child breastfeed frequently? For long periods?

#### **FEEDING OBSERVATION:**

As part of the dietary assessment, observe any feedings that take place during the interview, noting issues such as type of food, consistency, amount served and consumed, method of feeding, and attitude of both caretaker and the child. Make notes to supplement the 24-hour recall.

#### **DIETARY ASSESSMENT:**

5. Conduct 24-hour recall for all foods and liquids (including water) other than breastmilk.

Ask mother to tell you everything the child has taken by mouth in the previous day and night. Start in the morning and for each food, ask what the ingredients were, the amount and the mode of feeding (hand, cup, bottle, etc.)

Probe for snacks or pieces of fruit between meals, bites of family meals shared with the mother, foods purchased from vendors, drinks of tea, milk, water or other liquids. Be patient and allow the mother to recall everything she can.



Hour	Food or Drink	Ingredients	Amount	Mode

- Conduct a food frequency assessment about other foods, drinks, or snacks that the child commonly receives (other than those listed above). Ask the mother about foods she sometimes gives the child, but not yesterday. The idea is to learn about other foods that did not her included in the 24-hour recall, but that the child might eat at least once a week.

Probe for foods eaten only once in a while, such as when away from the house, on weekends, or just when available. Ask mother to estimate how much the child usually eats of this food, and about how often. Also, ask about purchased foods and snacks.

Food/Drink	Ingredients	Amount	Times per week

Ask the questions below that apply to the child's age and diet. Probe and take detailed notes.

For all children aged 0-5.9 months:

- What was the first thing given by mouth to the child after delivery?  
Why?  
Who recommended it?



8. When was breastfeeding started?  
Was colostrum given?  
Why or why not?  
Would you be willing to start breastfeeding within one hour after birth?  
Why or why not?
9. What is the next new food or drink you are planning to add to the child's diet?  
Why?  
When? How will you know the child is ready?

For all children aged 0-11.9 months, if ever breastfed:

10. Have you had any problems breastfeeding?  
(Probe insufficient milk, soreness, child crying, child refusing, being away from the child, etc.)  
What problems? (If none, skip to #11)  
What did you do to resolve these problems?  
Who do you ask/where can you go for help with breastfeeding problems?

For all children aged 6-23.9 months:

11. Is there any change in the child's appetite or feeding during illness? (Probe: diarrhoea and respiratory infection)  
Does the child take less, the same or more of breastmilk?  
Of water and other liquids?  
Of pap and soft foods?  
Of solid foods?  
If less, is it due to child refusing or you not offering?  
Is appetite a problem? What do you do about it?

For all children:

12. Where do you learn new information about child feeding?  
Who is a good (trusted) source of information or help with child feeding problems? Why? (probe for VHW, TBA, CBD)
13. Do you listen to the radio?  
If yes, how often? What do you like to listen to?  
Have you heard any information about child health on the radio?  
What messages? What did you think about it?  
What about television? (same probes as for radio)

By the end of the interview, try to carefully/indirectly find out the level of education of the mother, the number of children, and the birth order of this child (3rd, 5th, etc.)

Mother's Level of Education (check one):

None: \_\_\_\_\_ Primary incomplete: \_\_\_\_\_ Primary completed: \_\_\_\_\_  
Secondary incomplete: \_\_\_\_\_ Sec. complete: \_\_\_\_\_ Post-sec.: \_\_\_\_\_

No. of children: \_\_\_\_\_ Birth order of child in study: \_\_\_\_\_



**Closure: Thank the mother for answering your questions and explain you will return tomorrow to discuss the child's diet with her. Arrange a time to visit.**

Counselling visit arranged for: \_\_\_\_\_

Time finished: \_\_ \_\_ : \_\_ \_\_

8



**HOUSEHOLD TRIALS: COUNSELLING VISIT**

**BACKGROUND INFORMATION:**

Date:   /  /    
          d  d  m  m  y  y

Start time:   :  :  

Community: \_\_\_\_\_ Code: \_\_\_\_\_

Interviewer: \_\_\_\_\_ Code: \_\_\_\_\_

Child's Name: \_\_\_\_\_ I.D.: \_\_\_\_\_

Caretaker's Name: \_\_\_\_\_

Same person as interviewed on Visit 1? \_\_\_\_\_ (Y/N)

If no: Relationship to child \_\_\_\_\_

**DISCUSSION OF DIETARY ASSESSMENT:**

Explain your assessment of the child's diet to the mother, remembering to praise her for any positive practices.

For example:

Your child has/has not been receiving breastmilk..."  
(If receiving, note frequency and any problems.)

"In addition, you child is getting...

\_\_\_\_\_ (milk/drinks) and  
\_\_\_\_\_ (foods)."

(Note frequency, quantity, thickness for the mother.)

"Your child takes this from a bottle/cup/by hand/or from a common plate with the rest of the family, etc."

"As you have told me, your child seems to be healthy/ill in the past/frequently ill/ill today..."

(Ask any other important information the mother has mentioned. Ask if she agreed with your summary.)

**RECOMMENDATIONS:**

Recommendation # \_\_\_\_\_:

\_\_\_\_\_

Specific food options suggested:

\_\_\_\_\_



Mother's initial response:

Four horizontal lines for writing the mother's initial response.

Willing to try? Why or why not?

Four horizontal lines for writing the response to the willingness question.

Any other circumstances under which she would try the recommendation? When? What modifications?

Three horizontal lines for writing other circumstances, timing, and modifications.

Ask the mother to explain to you the new practice she will try. Make sure she understands and agrees. Summarize (in her own words) what the mother has agreed to try:

Three horizontal lines for summarizing the mother's agreement.

Ask if she has any questions or comments (record them). Make sure that all the details of preparation are clear.

Write what she is going to try on a "Child Feeding Reminder" slip and give it to her to keep.

Arrange a date for follow-up visit in about five days (see schedule). Ask mother when is a convenient time of day to meet her and try to arrange that she will be home when you come.

Follow-up visit arranged for: \_\_\_\_\_

Thank mother for spending time answering your questions and encourage her to really try the new practice.



Time finished: \_\_ \_\_ : \_\_ \_\_





Hour	Food or Drink	Ingredients	Amount	Mode

**OUTCOME OF TRIAL:**

Refer to summary of the agreement made with the mother during the second visit (after counselling). Using the following forms, note each practice she agreed to try, and ask questions listed. Probe for reasons why and make detailed notes.

Fill in separate forms for each practice she agreed to try, or for what she tried instead.

Recommendations: \_\_\_\_\_  
 \_\_\_\_\_

3.3 Has the mother tried it? \_\_\_\_ (Y/N)

3.4 If no, what are her reasons? Probe why not?

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

3.5 If yes, did she like it? \_\_\_\_ (Y/N)

3.6 What did she like about it?

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



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3.7 What didn't she like about it?

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3.8 How does she feel the child responded?

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3.9 Did she modify the recommendation? How? Why?

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3.10 Did other people say anything about it? Who? (Husband, in-laws, friends?) What did they say?

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3.11 Will she continue the recommended practice? Why or why not? Will it be every day?

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3.12 Would she recommend it to others? How would she convince them to try it? (in her own words)

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**Closure: Encourage mother to continue practice and ask if she has any questions or comments. Provide counselling or information as needed. Thank her for her participation in the study.**

Time finished: \_\_ \_\_: \_\_ \_\_

## WELLSTART INTERNATIONAL

Wellstart International is a private, nonprofit organization dedicated to the promotion of healthy families through the global promotion of breastfeeding. With a tradition of building on existing resources, Wellstart works cooperatively with individuals, institutions, and governments to expand and support the expertise necessary for establishing and sustaining optimal infant feeding practices worldwide.

Wellstart has been involved in numerous global breastfeeding initiatives including the Innocenti Declaration, the World Summit for Children, and the Baby-Friendly Hospital Initiative. Programs are carried out both internationally and within the United States.

### International Programs

Wellstart's *Lactation Management Education (LME) Program*, funded through USAID/Office of Nutrition, provides comprehensive education, with ongoing material and field support services, to multidisciplinary teams of leading health professionals. With Wellstart's assistance, an extensive network of Associates from more than 40 countries is in turn providing training and support within their own institutions and regions, as well as developing appropriate in-country model teaching, service, and resource centers.

Wellstart's *Expanded Promotion of Breastfeeding (EPB) Program*, funded through USAID/Office of Health, broadens the scope of global breastfeeding promotion by working to overcome barriers to breastfeeding at all levels (policy, institutional, community, and individual). Efforts include assistance with national assessments, policy development, social marketing including the development and testing of communication strategies and materials, and community outreach including primary care training and support group development. Additionally, program-supported research expands biomedical, social, and programmatic knowledge about breastfeeding.

### National Programs

Nineteen multidisciplinary teams from across the U.S. have participated in Wellstart's lactation management education programs designed specifically for the needs of domestic participants. In collaboration with universities across the country, Wellstart has developed and field-tested a comprehensive guide for the integration of lactation management education into schools of medicine, nursing and nutrition. With funding through the MCH Bureau of the U.S. Department of Health and Human Services, the NIH, and other agencies, Wellstart also provides workshops, conferences and consultation on programmatic, policy and clinical issues for healthcare professionals from a variety of settings, e.g. Public Health, WIC, Native American. At the San Diego facility, activities also include clinical and educational services for local families.

*Wellstart International is a designated World Health Organization Collaborating Center on Breastfeeding Promotion and Protection, with Particular Emphasis on Lactation Management Education.*

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