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Breastfeeding Promotion in Belize:

A Community Based
Integrated Approach

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NURTURE

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LIST OF ABBREVIATIONS

BIB	Breast is Best League in Belize
BFLA	Belize Family Life Association
BFC	Breastfeeding Counselor
BWAL	Belizean Women Against Violence
BWOD	Belizean Organization of Women and Development
CDC	Centers for Disease Control
CDD	Control of Diarrheal Diseases
CFNI	Caribbean Food and Nutrition Institute
CHW	Community Health Workers
CSO	Central Statistics Office
DWA	Department of Women Affairs
HECOPAB	Health Education and Community Participation Bureau
MOH	Ministry of Health
MSF	Medicins Sans Frontiers
NGO	Non-governmental Organizations
ORS	Oral Rehydration Solution
PAHO	Pan American Health Organization
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WHO	World Health Organization

EXECUTIVE SUMMARY

For the past seven years, since 1985, Breast is Best League in Belize (BIB), a private non-profit organization, has been fully funded to promote breastfeeding in Belize. In 1980, at a workshop to formulate a strategy for improving breastfeeding in Belize, one of the recommendations was to train volunteers to promote breastfeeding using a non-governmental agency. BIB was created in 1981 by the Women's Bureau of the Ministry of Social Affairs which then turned it over to volunteers. A full-time paid director was hired in 1985. Although the funding has been largely provided by external agencies such as USAID and UNICEF, the Belizean Ministry of Health has coordinated activities with BIB and given BIB the authority to work both within the formal health system and at community level. This report discusses BIB's activities, and the information available on the trends in breastfeeding practices in Belize over the period BIB has been promoting breastfeeding.

The main areas of BIB's activity are:

- ◆ Breastfeeding Counseling
- ◆ Training of health care professionals
- ◆ Increasing public awareness
- ◆ Mass Media promotion of breastfeeding

Breastfeeding counseling is conducted directly to mothers throughout the country. Counselors volunteer in the hospitals and prenatal and postnatal clinics as well as in the community. BIB staff developed educational materials on breastfeeding which are offered to the mothers. They also established a telephone hotline in Belize City to give advice to mothers who call in. The BIB monitoring system provided information on the range of activities over the last several years:

- The total number of breastfeeding counselors trained was 342 from 1985-1991. Of those, 9% were nurses, 42% were community health workers, and 5% were traditional birth attendants. The others trained were lay workers.
- Although counselors are not paid, the retention rate was quite good at 62%. (Some counselors are known to have emigrated out of Belize.)
- With the 211 breastfeeding counselors that were active in 1991, the number of women counseled per month is nearly 1900. Nurses on average would counsel many more per month because of their work in clinics.
- Each counselor works about 8 hours per month and counsels an average of 9 women per month.

- Over 21 district level training and supervisory workshops were held from 1988-1991. The breastfeeding counselors in the district were reported to meet together from 3-6 times a year but this is probably an underestimate since reports from the field are not sent to the central office regularly.
- About 50 breast pumps were rented annually in Belize City since 1988 to new mothers.

Reporting of activities by the volunteer breastfeeding counselors is irregular but improves if there is consistent supervision such as was provided by a Peace Corps volunteer who worked full time in Toledo district for 18 months in 1989-91.

Another activity organized by breastfeeding counselors is mother support groups that are usually convened within a community to address a particular issue of concern to the women, such as appropriate weaning or child abuse. There have been 6 groups established and one mother support group has been functioning in Toledo for the past 2 years.

Another major activity of BIB has been training of health care professionals.

- BIB has trained 32 nurses (about 6 per district) and 16 traditional birth attendants as breastfeeding counselors. This represents 11% of all the 280 nurses and 10% of the 161 traditional birth attendants registered in Belize .
- BIB staff worked with the nursing school to include breastfeeding in its curriculum and they regularly teach the classes on breastfeeding at the school.
- BIB has provided breastfeeding information packages to hospitals and trained nursing students to do practical community-based work with BIB.

Strategies that BIB has employed to raise awareness of breastfeeding among the public are multi-faceted and include the use of mass media as well as other means. For example, BIB staff and counselors speak frequently about breastfeeding and weaning to community groups and schools; BIB has produced billboards on breastfeeding for highways; breastfeeding murals have been painted on public walls; breastfeeding information is frequently provided on radio, television and through the newspapers.

Impact of BIB on Breastfeeding in Belize

In order to determine whether BIB's activities have had any impact on breastfeeding in Belize, a number of studies conducted in Belize on breastfeeding in the past decade were examined. Differences in methodologies and sampling and lack of comparison groups make it impossible to attribute categorically to BIB any changes in breastfeeding practices. However, since BIB has worked consistently to promote breastfeeding in Belize, it is reasonable to associate changes, if any, to BIB's activities.

The four sources of information examined were: a multicultural study on breastfeeding practices conducted in 1980/81 for a masters thesis; a national survey of maternity wards and clinics performed by the Ministry of Health (MOH) in 1983; the MOH information system on full breastfeeding rates for 4 month old infants that was instituted in 1985; and a national survey conducted in 1991 on women of childbearing age and their under five children (the Belize Family Life Survey). (Full breastfeeding refers to infants who are exclusively breastfed and those who receive breastmilk with water and other liquids, but no other milk or food.)

While these studies are not strictly comparable, they give some indication that improvements in breastfeeding seem to have occurred over the last decade when BIB has been actively promoting breastfeeding.

Significant findings were noted in the following areas:

Changes in Hospital Practices

One striking finding during this evaluation was the testimony of hospital workers who said that bottle feeding has been discontinued in the district hospitals due to education and training by BIB. In the four district hospitals visited during the evaluation, bottles of infant formula are not allowed in the newborn wards, even if brought in by mothers.

However, the Belize City Hospital, the tertiary hospital in the country, has a milk room where infant formula is prepared and provided to the maternity ward in feeding bottles, even though there is general acknowledgment that breastfeeding is preferable. There does not appear to be adequate lactation management knowledge by health workers in that hospital to provide support for mothers to breastfeed.

In 1983, the survey of the maternity wards found that 25% of the mothers did not breastfeed at all before discharge, which was generally at least 24 hours after birth. In the 1991 survey, only 17% of mothers reported not breastfeeding by 18 hours after delivery.

Current Breastfeeding Practices

Currently, 90% percent of children aged less than two years were breastfed with children in rural areas more likely to have been breastfed (96%) than those in urban areas (86%).

Results from interviews in 1983 in health clinics compared to the 1989 data from the clinic-based MOH system showed that at 4 months, only 18% were fully breastfeeding (breastmilk only or with other liquids, no other milk) in 1983 compared to 49% in 1989. In 1983 37% were not breastfeeding at all compared to 11% in 1989. These results suggest that there were improvements in breastfeeding over the last several years.

These results differ from the nationally representative sample of women studied in the Belize Family Health Survey. This survey found that at 3-4 months of age only 18% (12% of urban and 28% of rural infants) are fully breastfed, and 44% of infants (58% of urban and 21% of rural) are not breastfeeding at all. The MOH system reported that in 1989 at 4 months 49% were fully breastfed and only 11% were not breastfeeding. The MOH information system shows much higher rates of breastfeeding than the national survey, suggesting that clinic attenders may have better practices. This may in part be explained by the encouragement and support mothers receive from health workers at the clinic level. However it could also be due to a selection bias of women with good health practices (i.e breastfeeding) or rural mothers being more likely to attend clinics.

The findings of the nationwide survey suggest however, that there is still much room for improvement in breastfeeding in Belize, especially in urban areas.

BIB's Strengths

BIB has had support from the MOH right from its beginning, a factor that has facilitated its penetration into the formal health system. It has also enjoyed support from influential persons such as the wife of a former Prime Minister and the Principal Tutor from the nursing school.

Collaboration with other governmental and non-governmental organizations strengthens and enhances BIB's reach. For example CARE trained community health workers who were also trained by BIB as breastfeeding counselors; the Belize Family Life Association has nurses in the field with whom BIB can cross refer clients; and the Health Education and Community Participation Bureau (HECOPAB) has worked with BIB to produce educational materials, while BIB's network of volunteers has helped HECOPAB reach the communities.

BIB is fortunate in having trained and retained a good percentage of committed volunteers who are proud of the help they give other women. These women form the backbone of BIB's community outreach.

Conclusion

While BIB seems to have been successful in promoting changes in hospital practices and perhaps increased the proportion of women breastfeeding at four months, there is a need for more effort directed to increasing the duration of exclusive breastfeeding. Because of BIB's small staff (of only 4-6 paid staff), it is admirable that so much has taken place in Belize. This is a tribute to the hard work of the staff and to the volunteer activities of the counselors, board of directors and advisory board of BIB.

Recommendations

1. In spite of repeated attempts to institute an information system that will allow BIB to regularly and systematically monitor its activities, BIB's information system still needs considerable strengthening. Once a simple system has been designed with technical assistance from a health information specialist familiar with breastfeeding, a member of the staff could be put in charge to ensure, at specified regular intervals, that all documentation is in order. As BIB expands its activities, baseline and follow-up evaluations should be designed in order to help provide documentation of results.
2. Paid supervisors (even working part-time) in the districts would help coordinate the activities of the volunteers and improve record keeping. BIB could explore the chances of sharing the cost of such supervision with another agency.
3. BIB should work with hospital personnel to put in a system to regularly provide counseling to new mothers. This will be especially important in the larger towns where new mothers may not know a breastfeeding counselor personally. With particular respect to the Belize City Hospital, BIB should work out a plan of action with the relevant hospital personnel to offer breastfeeding training to all health workers working with mothers.
4. More emphasis needs to be placed on educating mothers on the benefits of exclusive breastfeeding in contrast to encouragement that has been primarily focused on promoting breastfeeding in general. There is a need to intensify education about exclusive breastfeeding (defined as breastmilk only with no water or any other food or liquid added for the first 4-6 months life) to make it acceptable to more mothers. However to do so, there will need to be ethnographic studies to assess and understand the constraints to exclusive breastfeeding.
5. BIB's experience with mother support groups has shown them to be a potential tool of empowerment for women. Such groups could be expanded if there were sufficient staff available for supervision and support to these groups.
6. More effort is needed to understand the constraints working women face in their attempts to breastfeed. Studies will be needed among working women to develop programs to help enhance breastfeeding in this group.
7. Because of its small size, with only 6 hospitals providing maternity services in the country and excellent hospital practices supportive of breastfeeding already in place in the district hospitals, Belize could be the first country with all its hospitals designated "Baby Friendly".

COUNTRY SETTING

Belize has an estimated population of 184,000 over 8,866 square miles, making it the most sparsely populated country in Central America (UNICEF Belize, 1991). A multi-ethnic society, Belize's population is composed of people of African descent (about 40%), Hispanic (about 33%), Mayans, Mennonites, East Indian, Chinese and Arab. The various ethnic groups are predominant in different parts of the country and tend to identify strongly with their ethnic group. While English is the official language, and its variant, Creole, is spoken by a large majority (86%) of the people, about half of the population speak Spanish fluently and smaller groups prefer to speak Garifuna, Maya, Ketchi and German. Fifty-three percent of the population live in the rural areas and only Belize district has more than half of its population living in urban areas. In recent years an estimated 30,000 persons have immigrated to Belize as refugees (UNICEF Belize, 1991).

The country is divided into 6 administrative districts which are Belize, Cayo, Corozal, Orange Walk, Stann Creek and Toledo (See Appendix A for a map of Belize). Belize City is the largest urban center with 27% of the population. The literacy rate (defined as the ability to read or write one's name) is reported to be 90%, making it one of the highest in Central America.

Agricultural commodities such as sugar, citrus, bananas, seafood and wood are the principal exports. Food forms 25% of the country's imports. Per capita gross domestic product is US \$1,228 (Belize in Figures, 1991). Women earn less than men in comparable conditions.

Healthcare Structure

The health care system is based on a series of district hospitals (6), rural health centers, and rural health posts in more remote areas. Belize City Hospital, the country's tertiary hospital is ill-equipped and in disrepair but there are plans to build a new one.

In 1988, there were 88 physicians, 280 nurses and 165 midwives registered in Belize (Central Statistics Office, 1989.) While nurses are trained in a nursing school in the country, all physicians and other health care professionals are trained outside the country. About half the nurses have midwifery training also. Most births (76%) take place in hospitals with the others occurring at home (CDC, 1991a). Nurse-midwives deliver 60% of births in the country, traditional birth attendants 20%, and physicians 17%.

The district hospitals, staffed by physicians and nurses and other health care auxiliary personnel, limit care to patients requiring routine care, including normal deliveries. The district hospitals also provide mobile health clinics that deliver services in the rural areas. Community health workers, who were volunteers until the government started paying them in September 1991, provide care at the more remote Rural Health Posts which provide basic services such as first aid, malarial treatment, oral rehydration, health education, and occasionally pre-natal care. These rural health posts are under the supervision of the nurse at the closest Rural Health Center. Others providing maternal care are 118 traditional birth attendants, of whom 80% are trained. They are non-salaried but charge delivery fees.

Maternal and Child Health

Over 80% of the target population are estimated to be covered by maternal and child health care services. In 1990, 87% of deliveries were by trained personnel (Medical Statistics Office, 1990) who can influence perinatal breastfeeding practices. The 1991 Belize Family Health Survey reported that 95% of women delivering within the 5 preceding years had received prenatal care and 87% had used government facilities for this care. Only 58% of mothers reported taking their infants to health services for newborn care, however urban women (74%) were nearly twice as likely to do so as rural women (40%).

The birth rate in Belize is 34 per thousand (CSO, 1989) and infant mortality rate is 20 per thousand (Belize in Figures, 1991). The under five mortality rate is 26 per thousand. Maternal mortality rate is calculated to be 5 per 10,000 live births, including deaths caused by abortions. The MOH Child Survival program is funded mainly by UNICEF with the MOH paying salaries and some supplies (USAID, Project Paper 1988).

The major causes of infant mortality are "perinatal causes" (46.8%), acute respiratory infection (17.7%), and malnutrition (7.1%). Mortality from "intestinal infectious diseases" is reported to have decreased from 32.3% in 1985 to 17.1% in 1987, and is believed to be due to the use of oral rehydration solution (ORS) (UNICEF, 1991)

HISTORY OF BIB LEAGUE

Breastfeeding promotion in Belize was initially launched through the efforts of two senior health professionals. In 1979, a senior nurse from the Ministry of Health, on her return from a workshop on breastfeeding in Barbados sponsored by the Caribbean Food and Nutrition Institute (CFNI), immediately recommended some changes to encourage breastfeeding. Together with the Minister of Health who had also recently returned from the World Health Organization (WHO) conference in Alma Ata on primary health care, they worked to restrict advertising of infant formula on radio and television and the promotion of formula in the hospitals by formula company representatives (Benguiche, 1991). In 1980 a workshop was organized to help develop strategies to promote breastfeeding. The recommendations from this workshop were multi-sectoral, and included:

- 1) Promotion of breastfeeding in prenatal and child health clinics;
- 2) Breastfeeding promotion at all levels of the school system;
- 3) Mass media coverage to promote breastfeeding;
- 4) National policies supporting breastfeeding (including a goal of having women breastfeed through 4-6 months), and the banning of formula in hospitals and clinics;
- 5) Training of volunteers to promote breastfeeding using non-governmental agencies;

- 6) Support for working women to breastfeed (including extension of maternity leave for working mothers to nearly four months, creches and counseling at work site).

The first five strategies have since been implemented to an impressive degree, while the sixth dealing with the special support of women working outside the home has yet to be accomplished to a significant level.

Breast is Best League

In 1981, the Women's Bureau of the Ministry of Social Affairs decided to create an organization with the sole responsibility of promoting breastfeeding. However once formed, BIB was quickly turned over to a group of volunteers consisting initially of a community development specialist, a Peace Corps volunteer, a housewife and a public health nurse (the same senior nurse with the Ministry of Health who had attended the breastfeeding meeting in Barbados). The purpose of the organization, named Breast is Best League (BIB), was to give information, encouragement, and instruction to women who wanted to breastfeed their babies. In March 1982, after BIB sponsored a series of lectures, a neighborhood mothers group was established in the St. Martin de Porres area of Belize City; several months later, a second group was established in the King's Park area of the city. In 1983, a volunteer director began work and with a small grant from the Canadian High Commission, an office was established and the first group of volunteer breastfeeding counselors were trained by a La Leche League leader to work in prenatal clinics, schools and at public exhibitions.

In 1984, BIB opened an office in space offered by the Women's Bureau of the Ministry of Social Services and established a lending library and a telephone hotline to give advice to women (Brechin and Middleton, 1987). In 1985, with funding from the United States Agency for International Development (USAID), BIB hired a full-time paid director and staff. A second grant from AID supported BIB activities from 1988-1991. Over the years UNICEF has also provided BIB with funds to purchase and distribute packets of breastfeeding information for dissemination to pregnant and lactating women in clinics and maternity wards. The Pan American Health Organization (PAHO) has also provided small grants. Thus in the last 7 years, there has been a fully funded, non-governmental agency focused on improving infant feeding (breastfeeding promotion and weaning education) operating in Belize, and working closely with the Ministry of Health.

ACTIVITIES OF BIB LEAGUE

BIB's strategy consists of an integrated mix of activities in the following areas:

- ◆ Breastfeeding counseling
- ◆ Training health care professionals
- ◆ Increasing public awareness
- ◆ Mass media promotion of breastfeeding

Breastfeeding Counseling

BIB has developed many activities to directly help women succeed in breastfeeding. They are: support and counseling provided to mothers by breastfeeding counselors in the community and in health clinics; counseling of mothers by trained nurses at the health clinics (prenatal, postnatal, and child welfare clinics) and in the maternity wards; and distribution of breastfeeding education materials to mothers.

Training of Breastfeeding Counselors

The BIB staff train breastfeeding counselors using a 20-hour course. The training generally takes place within the local district over a 6-week period, a few hours one day a week. Community leaders recruit women for the course or are asked for suggestions. Health care workers in the area are also recruited for participation in the course. The training covers: the benefits of breastfeeding; the anatomy and physiology of the breast; preparation to breastfeed; initiation of breastfeeding; the management of breastfeeding; the problems of breastfeeding and their management; weaning; birth control and breastfeeding; diarrhea and oral rehydration therapy. On successful completion of the course, a certificate is given certifying the woman as being a breastfeeding counselor. In Toledo district, among the Mayan population, men who are community health workers were trained as breastfeeding counselors because Mayan women are not allowed to travel outside their homes without their husbands who also deliver their own babies.

Following the initial training, breastfeeding counselors receive follow-up training through quarterly workshops. They are paid a stipend and their travel costs to the initial training and workshops. The workshops usually last one day. Both types of training stress not only breastfeeding management and weaning, but also confidence building, parenting skills, and other issues that the breastfeeding counselors state they want training in.

BIB's central office keeps records on the number and attendance at workshops held on continued training of the breastfeeding counselors. The reports are sent to the BIB office by a supervisor or by the executive committee secretary of the district BIB group. The reporting is very irregular, especially where there is no paid supervisor to send in reports. However, according to the reports that were sent in, each year there were 3-7 meetings or workshops of the breastfeeding counselors in each district (Table 1). Attendance at the meetings varied between 4 and 90, and averaged 20 persons per meeting. There were a total of 95 district level meetings and workshops held between 1988-1991. These figures are underestimates since reports are often not sent to the main office.

The Breastfeeding Counselors

About 350 volunteer breastfeeding counselors have been trained since 1985 and 211 are currently active. They have been recruited from the ranks of teachers, housewives, community health workers, nurses and other women, most of whom had successfully

breastfed at least one child and who agreed to help others breastfeed. Table 2 gives a breakdown by district of the current breastfeeding counselors functioning in 1991, and the retention rate of the volunteers within each District. For the purposes of this compilation, a breastfeeding counselor was considered active if she met one or more of the following conditions: if she reported at least once to the supervisor during 1991; if she submitted at least one written report to the BIB office; or if she attended a workshop during 1991. All breastfeeding counselors were trained by September, 1990 when the last breastfeeding counselors in Belize City were trained.

In the community and prenatal clinics, the breastfeeding counselors talk to pregnant women about breastfeeding. They also work with women soon after delivery to support them in breastfeeding and to encourage them not to bottle feed. The nurses who have been trained as breastfeeding counselors counsel women during prenatal, delivery, postnatal and child health care clinics. The traditional birth attendants also counsel during the prenatal and postnatal periods. Other health workers such as rural health nurses and clinic caretakers (clinic helpers trained on the job to receive mothers and children and weigh them) who are trained as breastfeeding counselors are well-placed to educate and help mothers breastfeed successfully. Community health workers, including three men, were also trained to be breastfeeding counselors. (The men, however, have moved to other jobs.) Breastfeeding counselors also work with fathers, educating them

Table 1
Number of Workshops or Meetings of Breastfeeding Counselors
Reported to BIB^a By District and Year

District	1988	1989	1990	1991	Mean
Belize City	3	4	7	5	5
Corozal	1	x	5	x	3
Orange Walk	1	4	3	3	3
Cayo	2	4	4	15	6
Stan Creek	x	1	9	1	3
Toledo	1	x	14	8	7
District Total	8	13	42	32	
Countrywide	x	x	1	x	

^aOften meetings are held but reports not sent on to BIB central office. x indicates no information reported for that year

Table 2
BIB Breastfeeding Counselors
1985-1991 No. Trained

District	Nurses	CHWS	TBAs	Others	Total ^a	# Active 1991	% Active ^b 1991
Belize	16	6	3	49	73	43	59%
Cayo	7	11	0	27	43	29	67%
Corozal	4	68	3	0	68	34	50%
Orange Walk	3	59	6	24	89	56	63%
Stann Creek	2	1	1	42	45	28	62%
Toledo	0	0	3	21	24	21	88%
Total	32	145	16	163	342	211	62%

^a Total per district does not correspond to numbers shown because some breastfeeding counselors fall under more than one category, eg. CHW may also be a traditional birth attendants (TBA).

^b see text for definition of "active"

on the need for their spouses to breastfeed to ensure the health of their infants. Many counselors have hand-held cylindrical breast pumps for use with women who have problems such as engorgement, poor sucking by the infant, or poor let-down reflex.

Within each district, an executive committee is elected by the breastfeeding counselors to coordinate activities in the district. In the towns the breastfeeding counselors visit the maternal and child health clinics to talk with mothers about optimum breastfeeding practices and proper weaning. In many cases the hospital staff refer to the breastfeeding counselors mothers who are experiencing problems with breastfeeding. However, there are no specified guidelines for referral to the counselors. Many mothers also seek advice from a breastfeeding counselor on their own. Although the principal activity of the breastfeeding counselors is to support breastfeeding mothers and help them solve some of the common problems encountered with breastfeeding, BIB is seen not only as a means of improving infant feeding practices, but also a means of helping women address problems within their communities.

The executive committee of breastfeeding counselors also oversees local fund-raising, calls together monthly meetings of the counselors, and communicates with the central BIB office. The breastfeeding counselors raise local funds through annual dues paid to the local committee (about \$2.50 US). Often the local district picks up part of the costs of quarterly workshops, such as the costs of meals for the breastfeeding counselors.

Mother support groups

In contrast to the general types of breastfeeding mother support groups, such groups in the BIB program are organized not just to deal with breastfeeding but also to address issues of concern to the women in the community, or to deal short-term with a specific issue. BIB support groups may consist of small or large numbers of women in the



community. BIB has established 6 such groups over the last several years, including groups in: St. Martin de Porres (Belize City) that was primarily a teen group, a group in Punta Gorda, Dangriga, Siene Bight, Belize River Valley, and Orange Walk. Groups are established by first distributing flyers to the community to tell of the first meeting.

At the meeting, BIB staff explain what BIB does, and tell the women who attend that they are there to help them in their roles as women and mothers. They then discuss whether they are interested in attending such a group, and what they would like to discuss, and how much they want to pay as dues to keep the group functioning. Topics that have been chosen by the groups in the past include: child spacing, child abuse, weaning foods, maternal nutrition, family court, and child support issues. In some cases, the groups are kept going for long periods of time by the enthusiasm of the breastfeeding counselors. In Punta Gorda (Toledo district), the group which was organized two years ago by a volunteer breastfeeding counselor meets once a month for discussions led by a breastfeeding counselor, or for a demonstration of the preparation of a weaning food, or a resource person is invited to speak on a specific topic. The mother support groups are seen as a means of bringing women together to share their strengths and to tackle their concerns together. At a mother support group meeting observed in Punta Gorda during this evaluation, it was clear that the women enjoyed the companionship and that the breastfeeding counselors took pride in bringing the group of women together.

Supervision of Breastfeeding Counselors

Although proper supervision is recognized as being crucial to the continued functioning of the volunteer breastfeeding counselors, BIB has not been able to provide effective supervision to the districts. One of the most satisfactory supervisory arrangements was provided in Toledo district by a Peace Corps volunteer for eighteen months within 1989-1991. The full time supervision provided by this Peace Corps volunteer probably contributed to the high retention rate (88%) of volunteers in that district. Those in Belize City are supervised by the BIB staff in the main office. In the district of Orange Walk, 67 community health workers (CHW) who were trained by CARE were also trained as breastfeeding counselors, and a part-time BIB supervisor was hired to oversee the activities of the breastfeeding counselors there and in Corozal where CARE also trained CHWs. However, the supervisor is unable to effectively work in Corozal as well as Orange Walk. In Cayo District, a BIB supervisor worked with breastfeeding counselors, many of whom were also trained by Medicins Sans Frontiers (MSF)-Holland. These CHWs were also volunteers who provided primary health care services to the population. In September, 1991, the MOH began paying salaries (\$50 Belize (\$25 US) per month) to these CHWs trained by nongovernmental organizations (NGOs). (It will be worth noting if this arrangement affects the morale of the BIB breastfeeding counselors who are expected to continue to work as volunteers.) In Stann Creek District there is no regular system of supervision, except through quarterly visits by the BIB staff from the main office.

Reporting of Activities by the Breastfeeding Counselors

The breastfeeding counselors are asked to submit monthly reports of their activities through the local president of the breastfeeding counselors or a supervisor. These reports are not always sent and are sometimes given orally in person or over the phone. Thus

an unknown percentage of activities is not reported. Table 3 shows the frequency with which reports from the breastfeeding counselors were received in the main office in Belize City during the past three years, demonstrating how infrequently some breastfeeding counselors report their activities.

In order to estimate the average number of activities conducted by volunteers, we examined the number of activities reported by breastfeeding counselors who submitted at least 3 reports over the last 3 years, and calculated the average number of activities per breastfeeding counselor based on the total reported by the breastfeeding counselors reporting more than 3 reports (Table 4). These analyses may be biased towards a higher level of reporting, if women reporting activities are also more likely to be more active. However, it also may be an underestimate as many activities may not be recorded at all given the informal setting in which counseling is often done in the community. Even in more formal situations such as a clinic, health care auxiliaries, such as caretakers may not necessarily report their breastfeeding promotion activities in the clinic to the local breastfeeding counselor president. These estimates, however, allow some assessment of breastfeeding counselor activities.

In Belize City, there were three nurses who had large numbers (50-100 per month) of women counseled through their work in clinics. Leaving out Belize City we estimated a typical month's activities for a breastfeeding counselor. On average they spend about 8 hours per month working, and they counsel about 9 pregnant or breastfeeding women per month. In addition, they give about 1 talk per month at a school or other organization, and work in a health clinic or maternity ward on average once per month. With the 211 breastfeeding counselors that were active in 1991, the number of women counseled per month is nearly 1900. Nurses on average would counsel many more per month because of their work in clinics.

Table 3
Frequency of Monthly Work Reports Submitted by Breastfeeding
Counselors, 1988-91

District	# Reports Received								
	1	2	3	4	5	6	7	8	9+
Belize	9	9	3	1	2	2	0	0	2
Cayo	4	7	6	4	1	5	0	3	4
Corozal	19	10	4	3	1	2	0	3	6
Orange Walk	27	11	6	7	6	1	4	4	6
Stann Creek	13	7	3	2	2	3	2	1	1
Toledo	3	1	2	4	2	2	1	1	10

Table 4
Average Monthly Activities
of Breastfeeding Counselors, by District, 1988-91

District	# Women Counseled	# Hrs ^a worked per BFC/mo.	Mat ward & Mobile clinic visits	Talks at schools & other orgs.
Belize	78 ^b	3	8	1
Cayo	15	9	2	0.9
Corozal	9	6.8	1.7	0.9
Orange Walk	5	8	1.5	0.4
Stann Creek	8	5.6	0.8	0.3
Toledo	8.5	12	2	0.7
Mean ^c	9.2	8.4	1.8	0.6

^aNumber of hours worked is calculated only for the small percentage of reports providing that information.

^bIncludes reports from nurses in three health centers in Belize City.

^cExcludes Belize City

The Central Office

BIB's central office in Belize City serves as drop-in center for women needing help in breastfeeding. It has a small staff consisting of the Executive Director, a trainer supervisor, a secretary, a financial assistant, and a part-time cleaner/messenger. A Peace Corps volunteer also works at the BIB office. All staff have completed the breastfeeding counselor's course and are able to counsel women on breastfeeding. About 10 women drop in for counseling each month. A telephone hotline is also available during working hours to help women with breastfeeding concerns. Since these calls are not regularly recorded, the number served in this way is not known.

Breast pumps are also rented from this office. Over the last 4 years breast pumps have been rented to about 200 women (Table 5), mostly women working outside the home. The rental cost for a cylindrical pump is US \$7.5 for the first 3 months and US \$2.5 US for three months thereafter.

In addition to the core staff at the central office, BIB has a supportive 8-member Board of Directors which sets its goals, directs its activities, promotes it and helps with local fund-raising. These are often women in key professional positions such as nursing, nutrition or women's affairs. They are all trained as breastfeeding counselors and are committed to breastfeeding. There is also an Advisory Board which consists of some former members of the board and others who provide technical expertise to BIB.

**Table 5
Breast Pump Rentals in Belize City at BIB Office**

Year	No. of Breast Pump Rentals
1988	43
1989	47
1990	60
1991 ^a	47

^athrough Nov. 1991

Training of Health Care Professionals

BIB has played an important role in the training of health professionals, especially nurses. Since the majority of health care is provided by nurses in Belize, their knowledge and attitudes concerning infant feeding is particularly important. Nurse-midwives deliver about 80% of hospitals births and they therefore have an important impact in perinatal practices in the hospitals. These nurses also supervise traditional birth attendants, who deliver about 20% of all births in Belize. BIB has trained 32 nurses (about 6 per district) and 16 traditional birth attendants as breastfeeding counselors. This represents 11% of all the 280 nurses and 10% of the 161 traditional birth attendants registered in Belize .

BIB began training nursing students within the nursing school in the mid- 1980's, and continues to teach courses there as part of the nursing curriculum. In many cases, nursing students have elected to do their practical community work with BIB or requested additional training in order to become certified breastfeeding counselors. Thus many of the breastfeeding counselors are nurses (9% of the total). Many nurses and other health workers who have not taken the full course to become certified have attended workshops on breastfeeding organized by BIB.

There has been no special training of physicians by BIB. However BIB has encouraged them to attend workshops both in and outside the country and has contributed funds for a few health care professional to attend conferences on breastfeeding. For example, an obstetrician from the Belize City Hospital was sent to the La Leche League medical conference last year, with the encouragement of BIB and support from UNICEF. In 1990 (BIB annual report, 1990), discussions were held with health workers in charge of hospitals to encourage changing hospital practices detrimental to breastfeeding.

Promoting Changes in Hospital Practices

The Norms and Procedures formulated by the Maternal and Child Health Committee in 1990 states that mothers should be assisted to feed healthy babies as soon after delivery as possible and "total breastfeeding should be taught for the first four months during subsequent clinic visits". While there is an attempt in all the hospitals to follow the stated norm, in Belize City Hospital, bottle feeding is very much in evidence on a visit to the maternity ward. The hospital has a milk room where artificial milk is prepared and delivered to the maternity ward in feeding bottles. Although the matron of the hospital is reported to be very supportive of breastfeeding, whether or not a mother gets some help and encouragement to breastfeed appears to be very dependent on the attitude of the nurse taking care of the mother. Women with normal deliveries are expected to breastfeed, but may receive bottles upon the mother's request. Infants room in with the mother, with a bassinet set up at the end of the woman's bed. It appears that although most of the health providers accept breastfeeding as being more desirable than bottle feeding there is no consistent effort to help mothers breastfeed. This attitude may be partly due to lack of staff time and knowledge of lactation management to actively help mothers breastfeed. According to a small number of mothers interviewed during this evaluation, the staff at the hospital do not always volunteer information about breastfeeding unless the mother asks and thus many mothers may be missed who do not ask for help.

A particular problem in the Belize City Hospital is with caesarian deliveries, which are done under general anesthetic. Babies are given bottles while the mother is in recovery, and then are allowed to alternate between bottle and breast during the first post-operative day. Since caesarian deliveries represent 17% of total deliveries in this hospital, this is a concern. The infants are kept in the neonatal unit for the first 24 hours, and then placed with the mothers. This is in contrast to the Belmopan hospital where infants delivered by C-sections are reportedly given to their mothers to be breastfed as soon as the mothers are awake from the anesthetic.

BIB staff make daily visits to the Belize City Hospital Monday to Friday in the morning to help new mothers but this service is obviously not sufficient to cover the large number of deliveries made in that hospital (about 210 per month). The hospital is across the street from the BIB office. Women with sick infants often come to the office to pump their breasts with the electric pump and take the milk to the hospital.

In the health centers in Belize City, breastfeeding is promoted by the nursing staff and by BIB volunteer breastfeeding counselors.

District Hospitals

There are 5 district hospitals outside of Belize City, and 34 health centers. Mobile clinics go out to villages from the health centers on 6-week rotations outside the towns. Prenatal care and well child services are provided in addition to other activities through this system. In all the district hospitals, the use of feeding bottles is strongly discouraged.



In the hospitals visited during this evaluation (Belize, Cayo, Toledo and Orange Walk), the nurses stated that as a result of BIB's activities, they had changed from encouraging bottle feeding, or at least tolerating it, to restricting bottle feeding completely. From discussions with others it appears that breastfeeding is actively encouraged in all the district hospitals and mothers coming to deliver are not even allowed to bring feeding bottles to the hospital. In Belmopan Hospital, the senior nurse reported major changes in hospital practices over the last several years. Previously, she would often make up bottles of formula at the beginning of the day. Now no bottles are used, and only one can of formula is available under lock and key for use in extreme cases. In Orange Walk, all women are expected to breastfeed, and even if they bring their own bottles, they are not allowed to use them. Premature infants are given breastmilk either directly from the mother, or expressed milk. No glucose water is given in any hospital in Belize, although oxytocin/ergometrine is given regularly to postpartum women even if they are breastfeeding.

Increasing Public Awareness

BIB has been very successful in raising public awareness about breastfeeding through information distributed in maternity wards, talks to community groups such as Parent-Teacher Associations, women's organizations, teachers and students in schools. It is remarkable how many people recognize the BIB Executive Director in everyday situations or comment on some breastfeeding promotion activity they have seen. BIB has also conducted training of traditional birth attendants both through BIB courses in which TBAs take part, and also as a part of the formal government program for training TBAs. Since the National Supervisor of TBAs was for several years the breastfeeding liaison between BIB and the MOH, this process was facilitated. The Principal Tutor of the Nursing School stated that breastfeeding has assumed a higher prominence in their curriculum since BIB began systematically promoting breastfeeding. Additionally BIB is often invited to present breastfeeding information during in-service training for health workers.

With technical help from the Health Education and Community Participation Bureau (HECOPAB) of the MOH, BIB has designed and distributed educational materials on breastfeeding and weaning. Breastfeeding information packets for maternity wards have been obtained with help from UNICEF, MOH, and PAHO.

Breastfeeding has also been incorporated into school curriculum under a UNICEF-funded School Health Education Project. BIB counselors volunteer their time to teach in the schools about breastfeeding and nutrition to preschoolers through high school students. In each district the peer counselors talk to the schools once a month or every other month (Table 4).

Other activities to present breastfeeding information to the public include the display of breastfeeding information at health fairs and BIB's participation in conferences dealing with maternal and infant nutrition.

Media Activities

In order to promote breastfeeding in urban areas BIB has used the media extensively. A video was prepared in 1987 which has been aired frequently on television over the last three years. The Executive Director of BIB is often interviewed on television and radio, and breastfeeding information spots are aired by the government station frequently. Recently the Executive Director was invited by the Belize Broadcasting Network to produce three educational spots which were being aired on television during prime time newscast countrywide at the time of this evaluation. BIB has two billboards on highways throughout the country. Breastfeeding promotional murals have also been painted on public walls in 4 districts and on the wall of the sports stadium in Belize City. Promotional material, including t-shirts have been produced and are sold from the BIB office.

The following activities during the first quarter of 1991 illustrate the typical frequency of mass media activities BIB conducts to promote breastfeeding: 3 television spots per day for 20 days; 2 radio spots a day for 20 days; one radio call-in program; 2 newspaper advertisements per month. Over the course of the year therefore, BIB constantly employs many different channels through the mass media to present information to the public.

BREASTFEEDING TRENDS IN BELIZE IN THE LAST DECADE

In order to assess whether these breastfeeding promotion activities have had an effect on breastfeeding rates in the country, it is helpful to examine the information available on breastfeeding. In the absence of similar pre- and post-intervention data and a comparison population, it is not possible to conclude categorically that any changes in breastfeeding occurred or whether any trends seen were due to BIB's breastfeeding promotion efforts. However, since BIB has been the main organ for the promotion of breastfeeding in Belize, it is reasonable to infer a probable relationship between breastfeeding trends and BIB's activities.

The sources of available information are: small surveys conducted in the last decade; the MOH breastfeeding rates collected from clinic attendees; and the national Belize Family Health Survey conducted by the Central Statistical Office with technical assistance provided by the Atlanta-based Centers for Disease Control. As the sampling and methodology differ across the studies, the results are not strictly comparable and are used only as indication of probable trends in breastfeeding.

We have used the World Health Organization/Control of Diarrheal Diseases (WHO/CDD) definition of breastfeeding practices in the report where possible. Exclusive breastfeeding is defined as when the infant receives only breastmilk, predominant breastfeeding is defined as when breastmilk is the predominant source of nourishment, but the infant may also receive other liquids such as plain or sugar water, teas, or juice.



A. Surveys of 5 Ethnic Groups in Belize (1980/81)

A study of a sample of infants from each of 5 ethnic groups in Belize was conducted as part of a masters thesis research in 1980/81 by Renate de Kleine and published in 1983. In 1980 the Belize Medical Report had listed gastroenteritis as being one of the leading causes of death in infants and young children and Kleine states that as early as 1958, data from the Child Welfare Clinic showed that about 30 percent of mothers began bottle-feeding within 2 weeks after birth. For her thesis research, Kleine collected retrospective information on feeding practices of the infants during their first year of life. The information was thus based on recall by the mother and may not be entirely reliable. The composition of the sample is shown in Table 6. She chose several sites throughout the country to obtain information on each ethnic group. There was no statistically representative sampling.

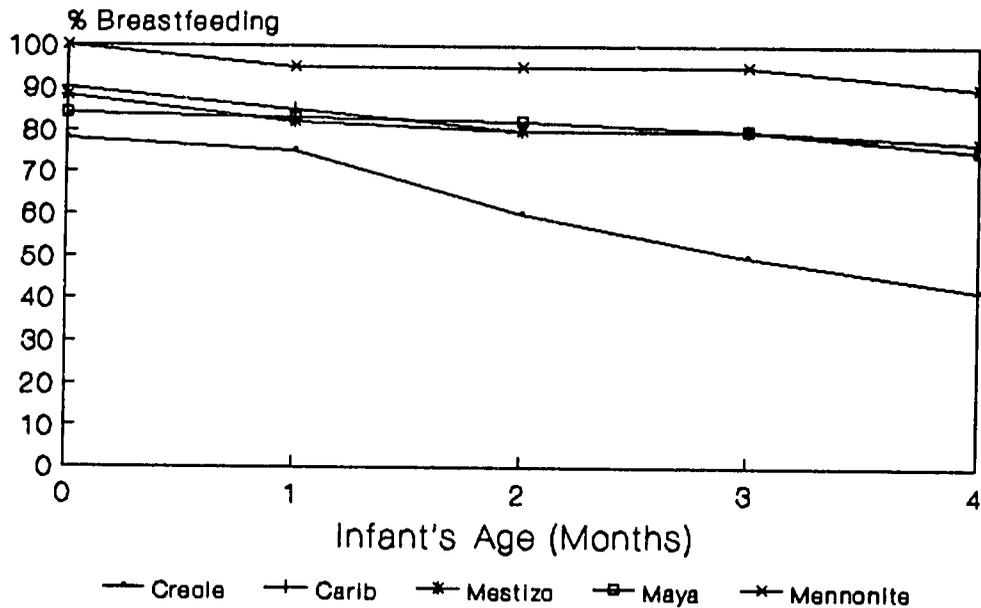
This study collected information on exclusive breastfeeding (breastfeeding with no glucose water and no other milk), predominant breastfeeding (breastfeeding with use of glucose water or teas and no other milk), and partial breastfeeding i.e., infant receives supplemental feedings). The interviews were conducted at fixed and mobile clinics as well as in homes.

Figure 1 gives the results for each of the 5 ethnic groups. Table 6 shows the large variation in rates of exclusive breastfeeding at four months for the different ethnic groups. It also shows the proportions predominantly breastfed. Of the total sample, about 15% were reported to breastfeed exclusively at four months. Mestizos commonly gave infants only glucose water, in addition to breastmilk. Creole and Carib infants were more likely to be given other milks in addition to glucose water. (It is not clear whether the use of plain water was included in the exclusive category, as the researcher did not mention plain water).

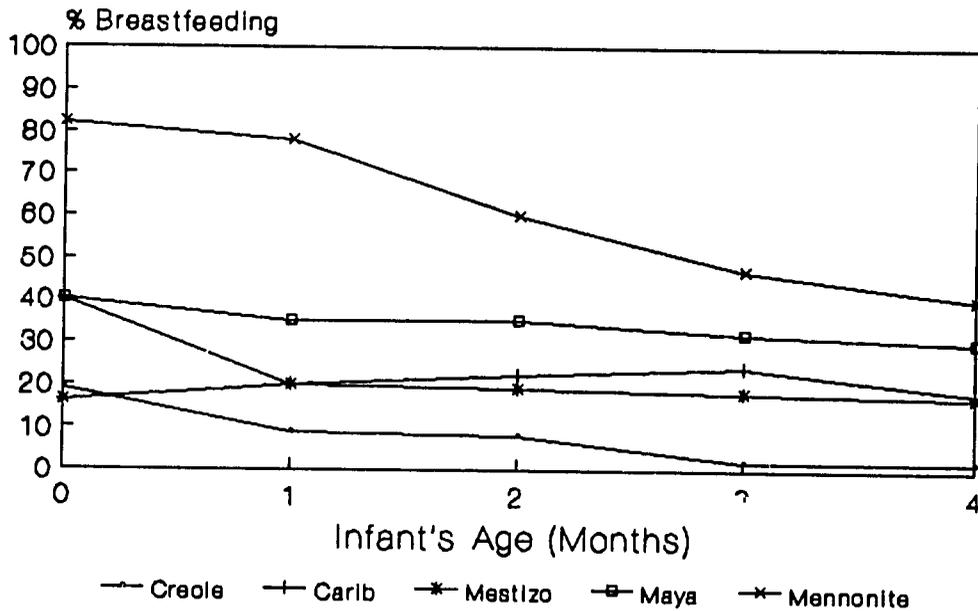
Except for Creoles, 75-80% of infants were reported as breastfed at 4 months of age. For Creole infants, only 40% were breastfeeding at that age, however they were also more likely to be urban and from Belize City, thus their breastfeeding rates may also represent an urban influence. Of interest is the fact that the study found that 18.8% of the Creole mothers never breastfed and another 4.7% gave up after one to three weeks. The researcher notes that "many more Creole mothers supplement and complete weaning during the early four months than do mothers of Maya and Mestizo group".

Figure 1

**Total Breastfeeding Practices in Belize
by Ethnic Status, 1981**



**Exclusive Breastfeeding in Belize
by Ethnic Status, 1981**



Source: Klein, 1983

Table 6
Breastfeeding at Four Months of Age
in Multicultural Infant Feeding Study in Belize, 1980/81

Ethnic Group	No. of Infants	% Exclus. BF	% Predominantly BF	% Total ^a BF
Maya	20	30%	35%	75%
Creole	64	2%	5%	40%
Carib	20	15%	15%	75%
Mestizo	65	15%	30%	75%
Mennonite	12	40%	50%	80%

Figures are estimates based on graphs shown in the thesis.

^aincludes supplemental feedings

Source: Kleine, 1983

B. 1983 MOH Survey of Hospitals and Clinics

A national survey was conducted in March and April, 1983 to assess breastfeeding practices in Belize (Benguiche, 1983). Mothers of live born infants delivered in maternity wards of all health districts and mothers of infants 26 weeks of age or less attending child health clinics in health centers or in mobile clinics were interviewed by MOH nurses. In order to obtain a 20% sample of newborn and young infants, each birth or visit was numbered consecutively, and every fifth mother was interviewed in each site. Data were available for 54 interviews from maternity wards and 262 interviews from child health clinics. This study attempted to obtain a random sample by interviewing every fifth mother but the numbers are small especially within the specified age groups, which were not equally represented in the clinics.

Results from Maternity Wards

For women in the maternity wards, 73% had initiated breastfeeding. Of the fourteen women who had not yet breastfed, five (9% of the total) infants were in the nursery (3 caesarian deliveries, and two others in the nursery because of a transfusion or other unspecified reason.) The other 17% had not breastfed for other non-health reasons (baby was sleeping, no milk in the breasts, etc.). Forty-five percent of the infants who had not yet breastfed had received glucose water or formula.

Of all the mothers, 94% intended to breastfeed their infants, but only 27% planned to fully breastfeed for 4 months. Reasons given for planning to supplement included the expectation that they would not have sufficient milk (26%), work outside the home (24%), or for other reasons, including that the baby would grow fatter with supplements (16%).

Nearly all mothers (96%) had received pre-natal care, with 71% having 4 or more visits. Of those, 79% had received information on breastfeeding during their prenatal visit. 33% of mothers reported that colostrum was not good for their babies, and of those, 83% said the public health nurse or other health personnel had told them that colostrum was not good for the baby.

These results show that while many women breastfed during their hospital stay, 25% of the mothers did not. Thus there was room for improvement in hospital practices to encourage women to breastfeed, and to teach them how to maintain milk supply, to reduce worries about insufficient milk. The study also pointed to the need for education of health professionals about lactation.

Results from Health Clinics

Results from the interviews in the health clinics showed that at 4 months, only 18% were fully breastfeeding (breastmilk with or without other liquids, no other milk), 45% were partially breastfeeding, and 37% were not breastfeeding at all. Table 7 gives the results for ages 0-4 months. These results are important for comparison to the results of the MOH health information system reported on later. Of mothers who had introduced infant formula, 44% reported they had "insufficient milk", 10% because of the "need to return to work", and other reasons reported including baby refusing the breast, doctor's advice, and health reasons, among others. The pattern of reasons given for stopping breastfeeding differ from those reported in a national survey in 1991 (reported below). These results pointed to the need to promote breastfeeding in Belize, because full breastfeeding rates were quite low at 4 months of age, and a relatively high rate of women were not even breastfeeding at all at that age (37%).

Table 7
Breastfeeding Practices in 1983
Results from Health Clinics
MOH Survey

	Full ^a	Partial	Not BF	N
0-<1 month	67%	33%	0	9
1 month	33%	46%	21%	39
2 months	34%	53%	13%	32
3 months	31%	45%	23%	77
4 + months	18%	45%	37%	105

^a includes breastmilk with or without water and other liquids but no other milk
 Source: Benguche, 1983



C. Ministry of Health Information System

The MOH began systematically collecting data on breastfeeding practices in 1984. In 1987, the system was computerized to facilitate analysis. Data from all health centers in Belize are sent to the MOH monthly. Reports are provided on the number of 4 month old infants who were fully breastfeeding, partially breastfeeding, and not breastfeeding. As children are seen at clinics, for either well child or other care, their growth is measured, and their breastfeeding practices recorded (Appendix A). The breastfeeding status of 4 month old infants is reported to the MOH medical statistics office (Appendix B).

Table 8 shows data on the results of these health information system reports. As shown, the rates often vary considerably from year to year. There was no central location where the yearly results on breastfeeding are kept, thus these data were difficult to locate. It is unclear whether the data are used at a national level, but at the local clinics it was reported that nurses use the monthly information to assess the practices in their areas. It is difficult from these data to assess whether changes in breastfeeding rates occurred over the last several years.

For 1989, data on breastfeeding provided to the MOH can be compared with the number of births by district reported by PAHO for the same year. Table 9 gives these data, showing that from 41% to over 100% of births had reports on breastfeeding sent to the MOH. There are two sources of error, including how accurate the birth registration system is as well as the accuracy of the data on breastfeeding. In Toledo, there were more reports than there were births, suggesting that either births were under registered, or reports were made for older infants, or some other data problems. This discrepancy is especially striking in view of the fact that the percentage of reported breastfeeding practices to total number of births in the other districts range from 41-77%.

Although this raises concerns about the validity of the data, we compared these data to those of the 1983 MOH survey conducted in health clinics. Results from interviews in 1983 in health clinics showed that at 4 months, only 18% were fully breastfeeding (breastmilk with or without other liquids, no other milk), and 37% were not breastfeeding at all. In 1989 (the latest year for which data are available), reports from clinics based on the MOH information system illustrated that at 4 months, 49% were fully breastfed, and only 11% were not breastfeeding. Table 10 shows these results, that suggest that breastfeeding had improved substantially between the time of these two surveys.

Table 8
Proportion of Infants Fully Breastfed^a at
4 months of Age, By District and Year
MOH Information System

District	1984	1985	1986	1987	1988	1989
Belize	29%	23%	NA ^b	NA	NA	33%
Corozal	41%	55%	NA	NA	NA	41%
Orange Walk	45%	30%	NA	NA	NA	31%
Cayo	79%	60%	NA	NA	NA	49%
Stann Creek	48%	44%	NA	NA	NA	55%
Toledo	81%	66%	NA	NA	NA	85%
Total	54%	46%	NA	44%^c	51%^b	49%
Number of infants	NA	NA	NA	NA	NA	2006

^a Breastmilk with or without water and other liquids, but no other milk.

^b No data are available (for 1986 reportedly because of the immunization campaign).

^c Data were only available for 1987 and 1988 totals.

Table 9
Numbers of births per District in Comparison to
Number of reports on Breastfeeding sent to MOH
1989

District	No. of BF Reports Registered	No. of Births	Per Cent
Belize	986	2175	45%
Corozal	343	831	41%
Orange Walk	747	1008	74%
Cayo	687	1210	57%
Stan Creek	461	595	77%
Toledo	846	681	124%
Total	4070	6581	62%

Table 10
Comparison of 1983 MOH Survey and
1989 MOH Information System
For Infants 4 months of Age

Year	Fully breastfeeding	Partially breastfeeding	Not breastfeeding	Number
1983	18%	45%	37%	105
1989	49%	40%	11%	4070

Source: Benguche, 1983; MOH information system 1989 (Central Statistics Office)

Motivating Women to Breastfeed Fully for at Least Four Months

As described above the MOH has in place a Health Information System (Appendix B) to record the mode of feeding of all children seen in the health centers and at the mobile clinics. From this information breastfeeding rates have been reported monthly since 1985 (Table 8). The government's goal of promoting full breastfeeding to 4 months of age is monitored based on these monthly reports. Appendix A gives an example of the form currently in use for recording information on the mode of feeding of the infants seen.

To encourage women to fully breastfeed for 4 months, nurses give certificates out to mothers who do so. Reports are sent to BIB registering all such recipients. This reflects the MOH's emphasis in recent years of the importance of breastfeeding. Table 11 presents the numbers of certificates given out in 1989 by district. In comparing these numbers to the numbers of fully breastfed 4 month old infants reported to the MOH in each district, it is apparent that the rate of providing certificates is much lower than would be expected. It may be that certificates are given mostly to women who attend clinics regularly, and thus those who do so irregularly are missed. Even among those who attend the clinics the certificate is not always given since some mothers call the BIB office for certificates if they are not given the certificate in the clinic. However it is impressive that this system has been adopted to motivate mothers to fully breastfeed for 4 months.

Table 11
Full Breastfeeding Certificates Awarded
by District in Comparison to No. of Births
1989

District	# Certificates ^a Awarded	No. Births ^b (estimated)	No. Fully BF at 4 months ^c
Belize City	35	2175	324
Corozal	52	831	139
Orange Walk	18	1008	232
Cayo	NA	1210	338
Stann Creek	33	595	256
Toledo	NA	681	717

^a BIB Records

^b PAHO (1991). "Health Activities in Belize. MOH-PAHO-WHO Newsletter." PAHO/WHO Local Office, Belize.

^c MOH Information System 1989 (Central Statistics Office)D. 1991 Belize Family Health Survey

D. 1991 Belize Family Health Survey

Belize is one of the few countries in the world that was not included in the World Fertility Survey, the Demographic and Health Surveys, nor any national contraceptive prevalence surveys. Data have therefore been limited on breastfeeding rates, maternal and child health service utilization and contraceptive prevalence. In 1991, the Belize Family Health Survey was designed "to provide health professionals with data to assess the utilization of health services in Belize" (CDC, 1991b). The survey was sponsored by the Belize Family Life Association (BFLA) in collaboration with Breast is Best League and Belize Rural Women's Association. The Central Statistical Office of the Ministry of Finance implemented the survey with technical assistance from the Atlanta-based Centers for Disease Control and funding by USAID.

The sampling was designed to be representative of urban and rural areas. Field work was conducted in January and February 1991, with 4567 households visited, and 2658 interviews conducted of women ages 15-44. Information on breastfeeding practices is available for all children born to each woman during 5 years preceding the survey. The questions on breastfeeding included in this survey are shown in Appendix C.

Table 12 gives results on incidence of breastfeeding by selected socio-economic characteristics. As shown, rural women (96%) are more likely to have ever initiated breastfeeding than urban mothers (86%) and ethnic background was also strongly related to ever breastfeeding (CDC, 1991c). Surprisingly, educational level was not related to breastfeeding initiation. The number of household amenities, a measure of wealth, showed a slight association with initiation of breastfeeding, those with more wealth being less likely to breastfeed (94% of those with least to 86% of those with most amenities).

Table 12
Percentage of Living Children 24 Months of Age or Less
Who Were Ever Breastfed by Selected Characteristics, 1991

Characteristic	Percent Breastfed	No. of Cases (unweighted)
Total	90%	980
Residence		
Urban	86%	526
Rural	96%	454
Years of Education		
0-7	92%	416
8	87%	337
9+	91%	227
No. of Household Amenities		
0-2	94%	417
3-7	88%	459
8-10	86%	104
Ethnic Group		
Creole	90%	250
Mestizo	89%	466
Garifuna	92%	87
Maya/Ketchi	95%	122
Other	82%	55

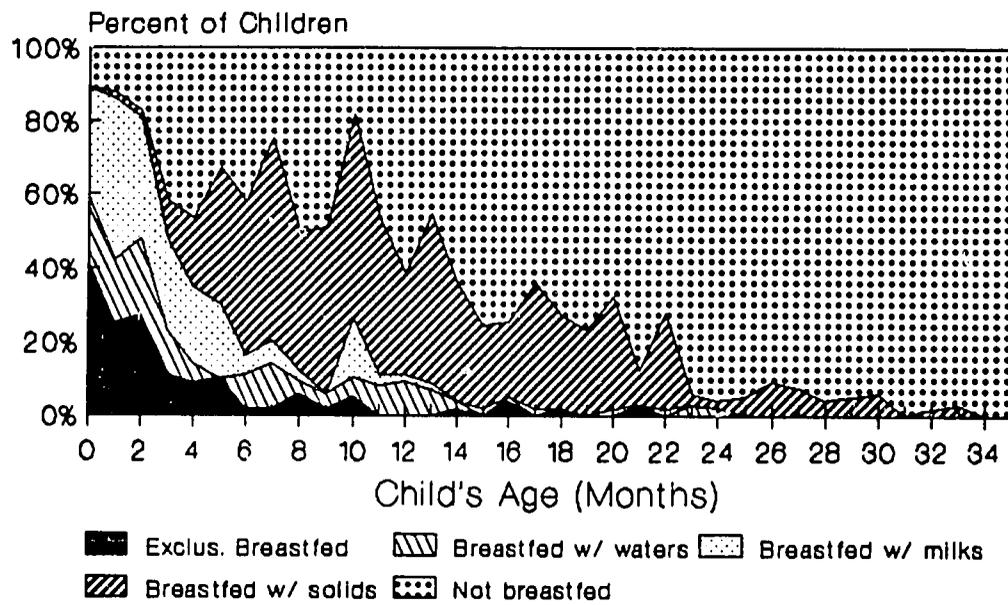
Source: Belize Family Health Survey, 1991 (Centers for Disease Control, 1991)

Figure 2 gives the results of this survey on breastfeeding practices of infants ages 0-3 years, based on reports of what foods/liquids were given to the infant during the day preceding the survey. Figure 3 gives these results for urban and rural children, and also separates out whether plain water is given and whether other liquids are provided. As illustrated, children in rural areas are more likely to be exclusively breastfed than urban children in the first 4-6 months of life.

Figure 2 shows that there is still quite high use of waters among infants during the first 6 months of life. At 4-6 months of age, less than 15% of infants are being exclusively breastfed.

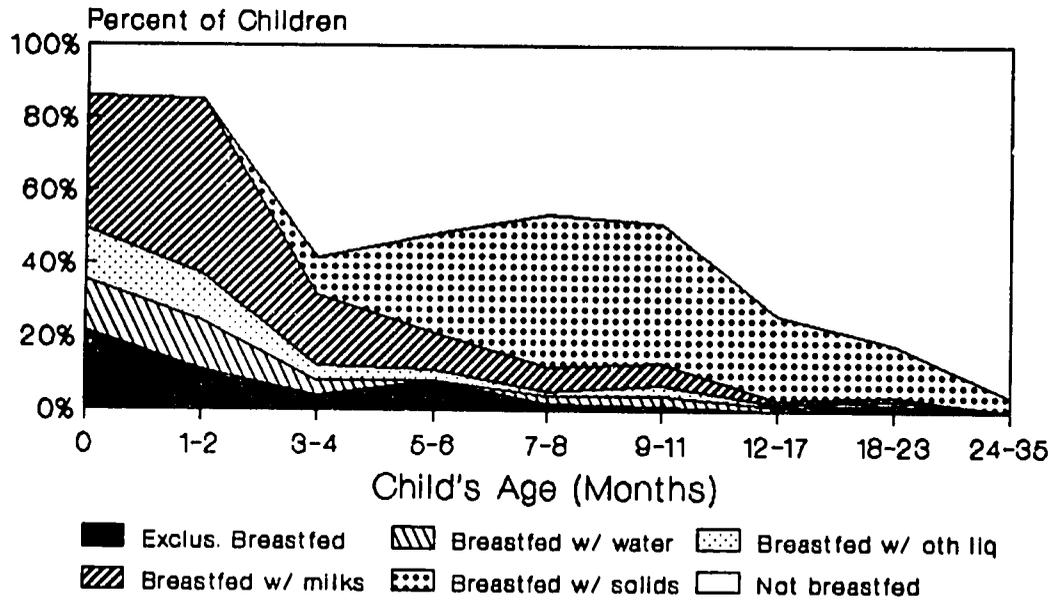
Figure 2

Infant Feeding Patterns in Belize, 1991



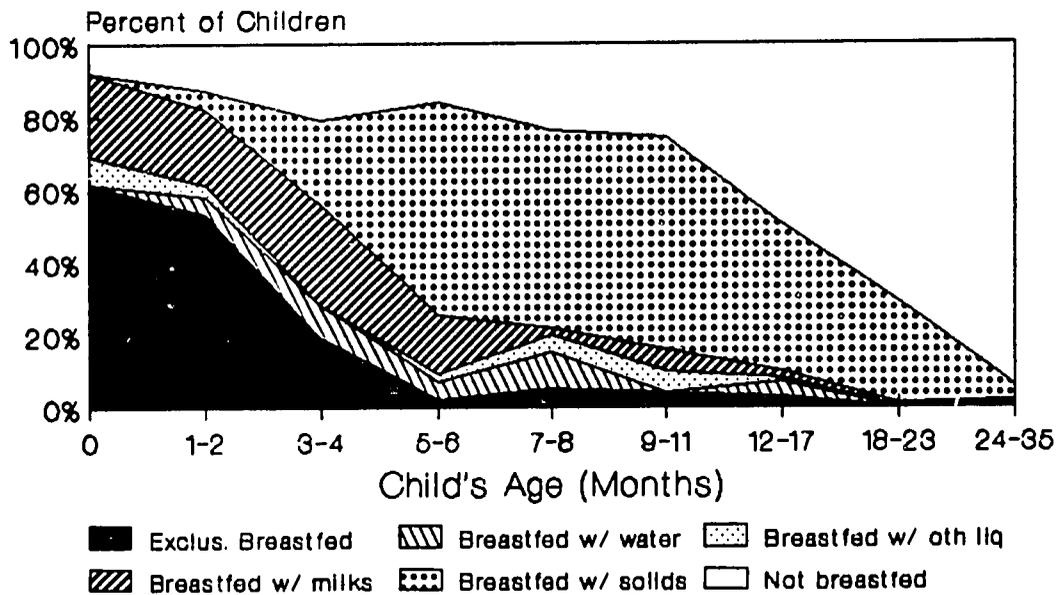
Source: Belize Family Health Survey

Figure 3
Urban Infant Feeding Patterns
in Belize, 1991



Source: Belize Family Health Survey

Rural Infant Feeding Patterns
in Belize, 1991



Source: Belize Family Health Survey

Timing of Initiation of Breastfeeding

The Family Health Survey shows that mothers delivering in a government facility are more likely to breastfeed their babies immediately after birth or within hours than those born in a private facility (Table 13). This probably reflects changes described by hospital workers as a result of repeated education conducted in the hospitals (see section on BIB activities). The 83% of mothers initiating breastfeeding immediately or within 18 hours of delivery contrasts with the 1983 maternity ward survey when 75% of mothers initiated breastfeeding during their hospital stay (which was generally at least 24 hours). The corresponding rates of timing of initiation of breastfeeding after delivery in a private facility and at home are 59% and 72% respectively. This points to the need for intensified efforts to reach private facilities with breastfeeding education.

Women who delivered vaginally were more likely to breastfeed within 18 hours after birth (81%) compared to those with Caesarian deliveries (62%). Thirty-eight (38%) percent of those with caesarian deliveries did not breastfeed until at least one day after delivery (CDC, 1991).

Table 13
Timing of Initiation of Breastfeeding Relative to Place of Birth of Child
Women 15-44 with Children 24 Months Old or Less
1991 Family Health Survey
(Percent Distribution)

Place of birth	Immediately after birth	Hours ^a after birth	Days ^b after birth	Unknown	Totals % No. (unweighted)
Govt. facility	48%	35%	16%	1%	100% (563)
Pvt. facility	32%	27%	41%	0%	100% (51)
At home	43%	29%	27%	1%	100% (161)
Total	46%	33%	19%	1%	99% (793)

^a Ranges from an hour to 18 hours. Eighty-four (84%) percent of those reporting within hours, reported initial breastfeeding within 5 hours.

^b Ranges from one day to 15 days. Eighty-nine (89%) percent report initiating breastfeeding within 3 days after delivery.

Source: Belize Family Life Survey, 1991 and Centers for Disease Control (1991c).

Duration of Breastfeeding

Table 14 gives the mean durations of breastfeeding by selected characteristics. The mean among women who ever breastfed for the country is 12 months. However urban women have a shorter mean duration of breastfeeding compared to rural women (10 vs. 15 months). Working outside the home, higher educational level, a higher number of household amenities, and being Creole all seem to be associated with a slightly lower duration of breastfeeding.

Table 14
Mean Duration of Breastfeeding, by Selected Characteristics of Women
1991 Family Health Survey

	Mean Duration of Breastfeeding (months)	No. of cases
Total	12	2624
Residence		
Urban	10	1705
Rural	15	915
Education		
<Primary complete	13	811
Primary complete	12	905
Secondary	11	908
No. of HH Amenities		
0-2	14	706
3-7	12	1296
8-10	10	623
Work Status		
Not working	13	1862
Working	10	762
Language		
Creole	11	1103
Spanish	13	1116
Other	13	406
Ethnic group		
Creole	10	887
Mestizo	13	1150
Other	13	588
Religion		
Protestant	11	1021
Catholic	13	1449

Source: Belize Family Life Survey, CDC (1991b).

WHO Breastfeeding Indicators

The WHO Control of Diarrheal Disease Program has developed a set of criteria to be used to assess breastfeeding practices worldwide (WHO, 1992). Only 10% of Belizean infants were exclusively breastfed between 0-4 months of age. These indicators are displayed in Table 15 and confirm the differences between rural and urban breastfeeding practices already noted. The data show that rural infants less than 4 months of age are much more likely to be exclusively or even fully breastfed than urban babies. Among infants 6-9 months old, those in the rural areas are more likely than urban infants to be fed breast milk as well as complementary foods (60% vs. 40%). This reflects the fact that among 3-4 month olds, 58% of urban infants are completely weaned in contrast to 29% of babies in the rural areas (Figure 4). The more formal education a mother has the less likely she is to exclusively breastfeed her baby aged 0-3.9 months. Older mothers (30+) are also more likely to breast feed their 0-3.9 month old babies and have a higher percentage of their 6-9 month old infants on breastmilk with complementary foods.

Table 15
WHO Breastfeeding Indicators
Feeding Practices of Infants
During 24 Hours Prior to the Interview
by Selected Characteristics of Mother
and Age of the Child, 1991

Characteristic	Excl.^a BF (0-3.9 mo)	Predominant^b BF (0-3.9 mo.)	Full^c BF	Timely^d complementary feeding (6-9.9 mo)	Ever BF (0-11.9 mo)
Total	24%	17%	41%	49%	92%
Residence					
Urban	10%	22%	32%	40%	88%
Rural	48%	8%	56%	60%	97%
Ethnicity					
Creole	16%	26%	42%	44%	88%
Mestizo	22%	14%	36%	50%	93%
Other	35%	12%	47%	56%	92%
Birth order					
1	17%	21%	38%	46%	90%
2-4	26%	17%	43%	52%	92%
5+	26%	13%	39%	46%	92%
Mother's age					
<20	21%	15%	36%	42%	90%
20-24	22%	19%	41%	48%	93%
30+	29%	14%	43%	60%	89%
Mother's education					
<8 yrs	34%	12%	46%	43%	92%
Prim. comp.	20%	1%	31%	58%	92%
Secondary	16%	30%	46%	42%	90%

- ^a Breastmilk only; no other liquids except vitamin drops or medicines.
^b Breastmilk, plus plain water, sugar water, juice, or teas.
^c Breastmilk only or breastmilk plus plain water, sugar water juice, or teas.
^d Breastmilk, plus other milks, semi-solids, or solids.

Source: Belize Family Life Survey-1991 and Centers for Disease Control.

Table 16 compares the results of the 1991 national survey to that of the 1989 MOH statistics on breastfeeding. As shown there are quite large differences in results of the two systems when totals are compared. The 1991 national survey shows much lower rates of breastfeeding than does the health information system based on clinic attendees in 1989. The clinic attendees were more likely to report full breastfeeding than the women interviewed in the national survey.

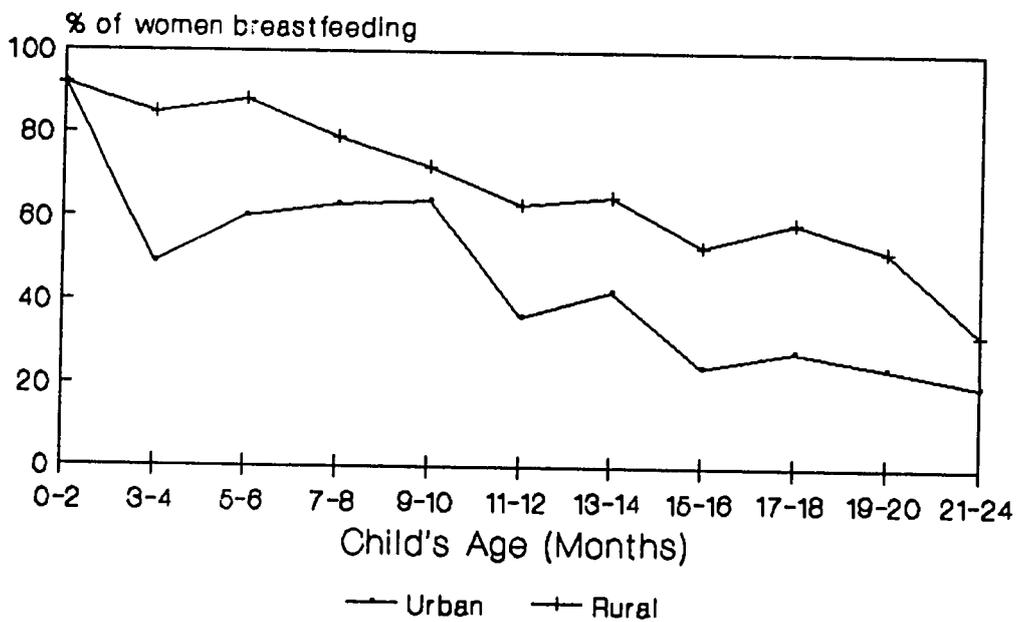
In the national survey, slightly more than half were from urban areas. The MOH system does not separate urban/rural background, however Table 9 illustrates that a lower proportion of births in the Belize district are included in the MOH reports from that district than from other more rural districts. Thus part of the difference may be caused by a different urban/rural distribution of the women included. Since rural women have higher breastfeeding rates, this may explain why the MOH reports higher breastfeeding rates than the 1991 national survey. This may also in part be explained by the encouragement and support mothers receive from health workers at the clinic level. However it could also be due to a selection bias of women with good health practices (i.e. breastfeeding) being more likely to attend clinics.

The distribution in breastfeeding practices by urban/ rural residence (Figure 4) shows how the urban rates fall off rapidly after initiation, while rural rates are still quite high through 6 months of age. Because the number of women with infants at specific ages is relatively small (generally less than 25 at each age group for each location), there is much random variation in the results. WHO (1992) suggests smoothing such data by using a running average on the results.

These results suggest that women in rural areas are breastfeeding more appropriately than those in urban areas. Urban mothers are supplementing early (Table 17) which may be related to the urban lifestyle that requires a proportion of mothers to leave their children at home after 6 weeks to go to work in jobs where they may not easily be able to pump their breastmilk or have a convenient place to store it at home or at work. However the 1991 survey found that less than 30% of mothers reported working outside the home. Table 18 illustrates the reasons reported by women for stopping breastfeeding, by residence (CDC, 1991a). While 10% of urban women reported stopping due to work, 5% of rural women reported this as reason, not substantially different. Thus work does not appear to explain much of the difference in breastfeeding between urban and rural areas.

Figure 4

**Percent of Women Breastfeeding
in Belize, by Residence (1991)**



Source: Belize Family Health Survey

Table 16
Comparison of Belize Family Health Survey
and MOH Information System Reports
Percent of Women Breastfeeding at 3-4 Months

Breastfeeding Practices at 4 months	MOH 1989	Family Health Survey 1991		
		Urban	Rural	Total
Fully Breastfed ^a	49%	12%	28%	18%
Partially Breastfed	40%	29%	51%	37%
Not Breastfed	11%	58%	21%	44%
N	4070	72	43	115

^a Combines both exclusive breastfeeding and predominant breastfeeding.

Source: Belize Family Life Survey, 1991 Central Statistics Offices and U.S. Centers for Disease Control.

Table 17
Percentage of Women Aged 15-44 Who are Currently
Breastfeeding Their Last Child Aged 3-4 Months,
by Breastfeeding Type and Selected Characteristics
(using weighted numbers)

	Selected Characteristics				
	Residence		Creole (%)	Ethnicity	
	Urban (%)	Rural (%)		Mestizo (%)	Other (%)
Not breastfeeding	58% ^a	21%	52%	40%	44%
Excl. breastfeeding	4%	19%	6%	10%	12%
BF + plain water	4%	9%	6%	4%	9%
BF + other liquid	4%	0%	6%	2%	0%
BF + milks	19%	28%	23%	26%	18%
BF + solids	11%	23%	6%	18%	18%
Number of women	72	43	31	50	34

^a Rounding may cause totals for characteristic to be >100%

Source: Belize Family Life Survey, 1991 (Centers for Disease Control, 1991c)

Table 18
Percentage of Women Aged 15-44 with Live Births
Since 1986 Who Stopped Breastfeeding
in Belize, by Reason for Stopping

Reason	Residence		Total (%)
	Urban (%)	Rural (%)	
Child refused	29	27	29
Weaning Age	15	20	16
No milk	12	17	14
Nipple/breast problem	11	4	9
Working	10	5	8
Mother ill/weak	7	7	7
Became Pregnant	3	11	6
Child ill/weak	1	1	1
Unknown/Other	13	8	7
No. of cases (unweighted)	213	126	339

COSTS OF BREAST IS BEST

Information from expenditures of BIB was used to estimate costs of the program. Expenditures for activities conducted by BIB during the May 1988 to July 1991 were averaged to obtain an annual cost of BIB's operation. Costs were not divided by type of activity (e.g. training or counseling) because information was not considered to be adequate for such a breakdown.

The total average annual cost of BIB operations was BZ \$148,000 (US \$74,000) per year. If these costs were covered by the Ministry of Health, this would represent less than 1% of the health budget. First year costs are slightly higher than costs in later years because of the inclusion of equipment purchases, such as a van, computer, etc.

The Ministry of Health also supports mass media efforts by BIB, through use of their health education department, estimated to be 25% of the health education budget or an average of BZ \$20,000 (US \$10,000) per year. Other sectors of the government provide free radio and television time to BIB for mass media spots. These costs were not able to be estimated.

BIB'S STRENGTHS

Several factors have contributed to the ability of BIB to influence breastfeeding practices in the hospitals as well as reach the public with breastfeeding information. These factors are discussed below.

Support from MOH

BIB enjoys the support of the Ministry of Health beginning with the Minister of Health. This support has greatly facilitated BIB's access to the health care system, making it possible to train health workers to make changes in the hospitals and clinics and encourage mothers to breastfeed. During the past few years health workers attribute changes they have made in hospital procedures to the influence of BIB.

Leadership

Much of BIB's success can be linked to the energetic and innovative efforts of its executive director. Her hard work and dedication have been an important component to the BIB's ability to work so effectively with few staff and resources.

Support by Influential Persons

Right from the beginning BIB has been able to attract key Belizeans who have helped build the organization. For example the wife of a former Prime Minister served on the board and a former Deputy Minister, currently a cabinet member assisted BIB in

the initial stages and even went on television herself to promote breastfeeding. Another example is the Principal Tutor of the nursing school who served on BIB's Board of Directors and is now on the Advisory board. BIB is thus able to attract persons influential in different walks of life. That ability is generally demonstrated in the mix of persons who serve on BIB's board. The board members provide technical help, managerial services, such as accounting, as well as help BIB raise funds.

Collaboration with Local Organizations

BIB enjoys remarkable collaborative linkages with both governmental and non-governmental organizations involved with women's and children's health and nutrition issues. The MOH recognizes BIB as an important contributor to improving infant feeding and solicits BIB's participation in training and policy-formulation. HECOPAB, a governmental department, provides technical help to BIB for the development of educational materials. BIB has worked closely with CARE, a private organization. BIB collaborated with CARE to train CARE-sponsored community health workers and thus spread BIB-trained breastfeeding counselors into some areas BIB had not penetrated. BIB carries out educational activities with other organizations. For example, the Belize Rural Women's Association has groups throughout the country, and all have received training in breastfeeding. As stated previously, BIB trained CHWs working with CARE, Medicins sans Frontier-Holland, and BFLA staff have been trained by BIB in breastfeeding.

In the field, BIB's breastfeeding counselors refer mothers to BFLA staff (eg. for family planning) and BIB receives referrals from BFLA when necessary. The Peace Corps has assisted BIB for several years. For 18 months in 1989 to 1991, a Peace Corps volunteer worked with BIB as a full-time supervisor of BIB's activities in Toledo. And currently, BIB is training a Peace Corps volunteer in the main office as a supervisor for Belize district activities. Other organizations that have collaborated with BIB include the Belizean Women Against Violence (BWAL), Belizean Organization of Women and Development (BOWAD), Department of Women Affairs (DWA), and PRIDE/Belize, an anti-drug abuse organization.

BIB enjoys excellent relations with the educational system also. BIB counselors regularly give talks to teachers and students beginning with preschool students.

The Volunteer Breastfeeding Counselors

BIB has been able to train and retain a large percentage of a group of dedicated volunteers who appear to enjoy their work. Not only do these women volunteer their time and energies, they even pay for the privilege of doing so! At the district level they collect dues and sometimes provide part of the costs of the district workshops. When together they seem to share a special bond and pride in what they are trying to do.

RECOMMENDATIONS

1. BIB has enjoyed a great deal of moral support, encouragement and recognition from the Ministry of Health. In its National Plan of Action for Children 1992-2000, a stated goal is to implement constant breastfeeding promotion and to strengthen BIB's efforts to reinforce breastfeeding. The Ministry of Health should provide financial support to BIB to allow it to continue using its vigorous energies and organizing powers in promoting breastfeeding.
2. In spite of repeated attempts to institute an information system that will allow BIB to regularly and systematically monitor its activities, BIB's information system still needs considerable strengthening. Once a simple system has been designed with technical assistance from a health information specialist familiar with breastfeeding, a member of the staff could be put in charge to ensure, at specified regular intervals, that all documentation is in order. As BIB expands its activities, baseline and follow-up evaluations should be designed in order to help provide documentation of results. BIB should continue its collaboration with the Central Statistics Office in this effort, as the proposed repeated Family Health Surveys will be a possible means of evaluating BIB activities in the future.
3. A paid supervisor with appropriate skills in each district will help coordinate the activities of the network of volunteers. It will also facilitate the record keeping. BIB could discuss the possibilities of sharing the costs of supervision with another agency, such as the primary health care system. These supervisors should then encourage breastfeeding counselors to visit all pregnant women in their neighborhoods to encourage exclusive breastfeeding, and then visit them during the immediate postpartum period, and during the first few months to encourage exclusive breastfeeding. It would help to systematize the work of the breastfeeding counselors so that such women are reached.
4. BIB's experience with mother support groups has shown them to be a potential tool of empowerment for women. Such groups however are difficult to maintain without strong leadership and are difficult to maintain long distance with the small staff at the head office. This leadership could be provided by a local supervisor. BIB should expand its efforts in the areas of support groups, and continue working with other local organizations to promote empowerment of women.
5. In order to maximize the chances that a breastfeeding woman can obtain help when she needs it, BIB and hospital staff could make sure that mothers are systematically provided information, such as a brochure with the telephone number and address of the BIB office or of a local breastfeeding counselor in the woman's neighborhood.
6. BIB should discuss with the MOH and the relevant persons in the Belize City Hospital ways to formulate a plan of action that will help the hospital follow more closely the "Ten Steps to Successful Breastfeeding" recommended by WHO and

- UNICEF. Part of this plan will be to offer breastfeeding training to all relevant health providers in the hospital. BIB should work with the Belize City Hospital to design a program where the hospital will hire breastfeeding counselors to work on a regular basis in the Belize City Hospital helping mothers breastfeed.
7. Belize has the potential to be the first country to have all its hospitals be certified as "Baby Friendly". BIB should coordinate with UNICEF to make this happen.
 8. It appears that there is not enough emphasis placed on educating mothers on the benefits of exclusive breastfeeding in contrast to encouragement given to mothers to breastfeed. This is reflected in the MOH's use of "full breastfeeding" in the reporting system. There is a need to intensify education about exclusive breastfeeding (defined as breastmilk only with no water or any other food or liquid added for the first 4-6 months of life) to make it acceptable to more mothers. However to do so, there will need to be ethnographic studies to assess and understand the constraints to exclusive breastfeeding. The MOH should use "exclusive breastfeeding" at 4 months as an indicator in its reporting system.
 9. BIB needs to research the reasons mothers, especially in the urban areas, stop breastfeeding in the early months of life (51% of all mothers at 4 months). Studies focusing on Creole women in particular are needed. This can be done through the same type of studies suggested in #8 above. This will help BIB develop education to address the appropriate concerns or advocate policy changes that may encourage more mothers to breastfeed longer.
 10. There is a perception working women such as those employed in large scale manufacturing factories find it difficult to continue breastfeeding beyond the early weeks. Studies will be needed among such working women to determine the constraints they face, and to develop programs to help enhance breastfeeding in this group.
 11. BIB should work with the government on extending maternity leave.
 12. BIB should intensify its efforts to train nurses as breastfeeding counselors so they will be able to directly help mothers in the hospitals and clinics.

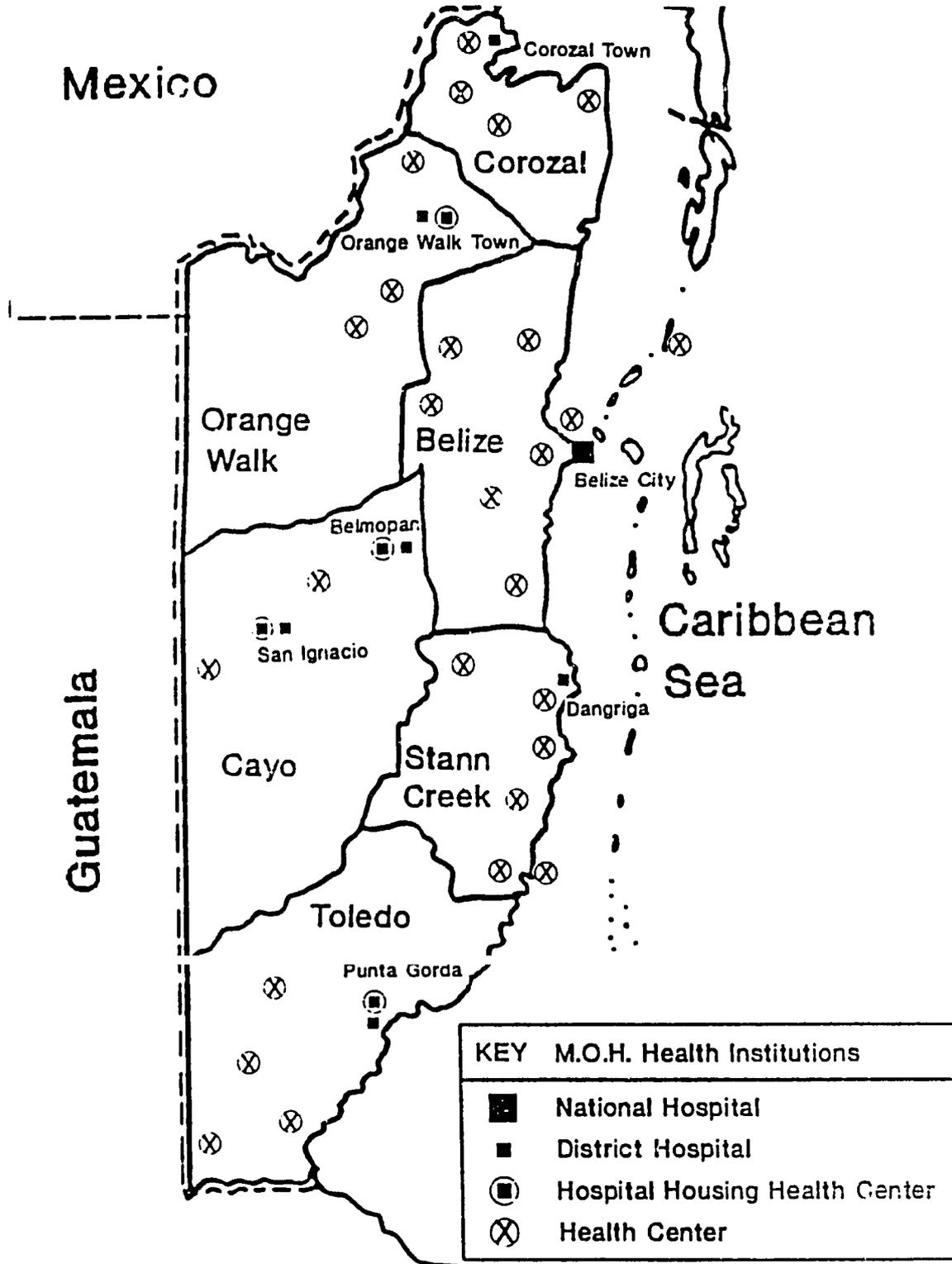
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Appendix A
Map of Belize

BELIZE

Health System



Appendix B

Form Used by Nurses to Collect Breastfeeding Information

Appendix C

Monthly Reporting Form on Breastfeeding

Sent to Office of Medical Statistics

Ministry of Health

**MINISTRY OF HEALTH
PUBLIC HEALTH NURSING SERVICE
MONTHLY STATISTICS REPORT
MATERNAL AND CHILD HEALTH ACTIVITIES**

Health Center: _____

Report for the month/year: _____

1. AUDIT	
Date Completed	____/____/____
Date Received	____/____/____
PHN	____/____/____
SPHN	____/____/____
HSC	____/____/____

I. General Clinic Information

2. CLINIC SESSIONS

Health Center Mobile Clinic	Child Health	Maternal Health	
	Months	ANC Visits	Post Natal
_____	_____	_____	_____

II. Child Health

3. VISITS

A. Newly Registered	Health Center	Mobile Clinic	D2. No. of Children Referred to:	
			PHN	_____
1) 0 - 28 days	_____	_____	PHN	_____
2) 1 - 11 mths	_____	_____	PHN	_____
3) 1 - 4 yrs	_____	_____	MO	_____
B. Re-visits			SPHC	_____
1) Under 1	_____	_____		
2) 1 - 4 yrs	_____	_____		
Total Visits	_____	_____		

D1. Total Number of Children Referred _____

4. DIARRHEAL DISEASE CONTROL

A. Age	# cases with ORS	# cases treated with ORS	B. No. cases Referred	_____
Under 1 yr	_____	_____	C. No. ORS packets distributed to Health Workers	_____
1 - 4 yrs	_____	_____	to patients/others	_____

5. ACUTE RESPIRATORY INFECTION

A.	Age	Mild	Moderate	Severe	B. No. of cases Referred
	Under 1	_____	_____	_____	_____
	1 - 4 yrs	_____	_____	_____	C. No. of cases treated with antibiotics

6. COMMUNICABLE DISEASES

A. Child EPI	Under 1 - 4	No. children Referred
	1 Yr	Yrs
1) Measles	_____	_____
2) Diphtheria	_____	_____
3) Pertussis	_____	_____
4) Flaccid Paral.	_____	_____
5) Tuberculosis	_____	_____
B. Neonatal Tetanus	_____	_____
C. Other Diseases		
1) Parasites	_____	_____
2) Scabies	_____	_____
3) Eye Infection	_____	_____
4) Skin Infection	_____	_____

7. BREASTFEEDING

A. No. of babies fully breastfed up to the age of 4 months	_____
B. No. of babies partially breastfed up to 4 months of age	_____
C. No. of babies never breastfed	_____

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Appendix D

Questionnaire Used In Belize Family Health Survey

Section on Breastfeeding

243. Was it that you wanted no more children, or that you just wanted to wait longer before another pregnancy?

1 Wanted no more children				
2 Wanted to wait longer				
9 Don't know				

244. Did you ever breastfeed (NAME)?

1 Yes (SKIP TO 246)	1 Yes (SKIP TO 252)			
2 No				

245. Why did you not breastfeed (NAME)?

1 Mother ill/weak				
2 Child ill/weak				
3 Child died				
4 Nipple/Breast problem				
5 No milk				
6 Working				
7 Child refused				
8 Other _____ (specify)				
(SKIP TO Q256)				

246. How long after birth did you first put (NAME) to the breast? RECORD IN DAYS IF MORE THAN 24 HOURS.

000 Immediately
 1 Hours _____
 2 Days _____

247. IF STILL ALIVE: Are you still breastfeeding (NAME)? (IF DEAD, CIRCLE '2')

1 Yes
 2 No (SKIP TO Q252)

248. How many times did you breastfeed last night between 6 p.m. and 6 a.m. (IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE NO.)

Number of nighttime feedings _____

249. How many times did you breastfeed yesterday during the daylight hours? (IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE NO.)

Number of daylight feedings _____

250. At any time yesterday or last night was (NAME) given any of the following?:

	Yes	No
Plain water?	1	2
Sugar water?	1	2
Juice?	1	2
Herbal tea?	1	2
Baby formula?	1	2
Fresh milk?	1	2
Tinned or powdered milk?	1	2
Other liquids?	1	2
Any solid or mashed food?	1	2

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251. CHECK Q250 FOOD OR LIQUID GIVEN YESTERDAY?	Yes to one or more ____ (SKIP TO 256)				
	No to all ____ (SKIP TO 255)				
252. For how many months did you breastfeed (NAME)?	Months ____ 00 < 1 month 95 Until died (SKIP TO Q255)	Months ____ 00 < 1 month 95 Until died (SKIP TO Q255)	Months ____ 00 < 1 month 95 Until died (SKIP TO Q255)	Months ____ 00 < 1 month 95 Until died (SKIP TO Q255)	Months ____ 00 < 1 month 95 Until died (SKIP TO Q255)
253. Why did you stop breastfeeding (NAME)?	01 Mother ill/weak 02 Child ill/weak 03 Child died 04 Nipple/Breast problem 05 No milk 06 Working 07 Child refused 08 Weaning age 09 Became pregnant 10 Other ____ (specify)	01 Mother ill/weak 02 Child ill/weak 03 Child died 04 Nipple/Breast problem 05 No milk 06 Working 07 Child refused 08 Weaning age 09 Became pregnant 10 Other ____ (specify)	01 Mother ill/weak 02 Child ill/weak 03 Child died 04 Nipple/Breast problem 05 No milk 06 Working 07 Child refused 08 Weaning age 09 Became pregnant 10 Other ____ (specify)	01 Mother ill/weak 02 Child ill/weak 03 Child died 04 Nipple/Breast problem 05 No milk 06 Working 07 Child refused 08 Weaning age 09 Became pregnant 10 Other ____ (specify)	01 Mother ill/weak 02 Child ill/weak 03 Child died 04 Nipple/Breast problem 05 No milk 06 Working 07 Child refused 08 Weaning age 09 Became pregnant 10 Other ____ (specify)
254. INTERVIEWER: REFER TO TOP OF CHART: CHILD ALIVE?	1 Alive__ (SKIP TO 256) 2 Dead__				
255. Was (NAME) ever given any water, or something else to drink or eat (other than breastmilk)?	1 Yes 2 No (SKIP TO 257)				
256. How many months old was (NAME) when you started giving him/her the following?					
Formula or milk other than breastmilk?	Age in months ____ 96 Not given				
Water or other liquids?	Age in months ____ 96 Not given				
Any solid or mashed food?	Age in months ____ 96 Not given				
	(IF LESS THAN ONE MONTH, RECORD '00') (DK = 98)	(IF LESS THAN ONE MONTH, RECORD '00') (DK = 98)	(IF LESS THAN ONE MONTH, RECORD '00') (DK = 98)	(IF LESS THAN ONE MONTH, RECORD '00') (DK = 98)	(IF LESS THAN ONE MONTH, RECORD '00') (DK = 98)
257. How many months after the birth of (NAME) did your menstrual period first return?	Months ____ 96 Hasn't returned 98 Don't remember				
258. Have you resumed sexual relations since the birth of (NAME)?	1 Yes 2 No (SKIP TO Q260)				

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