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LAC Health
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Sustainability

THE STATE OF
BREASTFEEDING
IN BOLIVIA:
*PRACTICES AND
PROMOTION*

Final Report

July 1992

Prepared for the
U. S. Agency for International Development
by MotherCare, John Snow, Inc./Manoff Group
and LAC Health and Nutrition Sustainability, ISTI/URC

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**THE STATE OF BREASTFEEDING IN BOLIVIA:
PRACTICES AND PROMOTION**

By

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EXECUTIVE SUMMARY

The promotion of breastfeeding is an important strategy to reduce infant mortality. To develop a program in this area, the first step is to evaluate the national situation. This assessment of breastfeeding activities in Bolivia was requested by USAID/Bolivia, through MotherCare and LAC Health and Nutrition Sustainability contracts. Its purpose was to review the available information, identify supporting factors and obstacles, and identify areas requiring immediate action.

The working team was composed of Dr. Andrés Bartos, pediatrician and Coordinator of COTALMA; Dr. Mary Ruth Horner, nutritionist and consultant for MotherCare/Manoff Group; and Lic. Gloria Peñaranda, M.A., Chief of Nursing at the Children's Hospital in La Paz and Executive Secretary of COTALMA. Dr. Bartos and Lic. Peñaranda were hired as consultants to the LAC Health and Nutrition Sustainability Contract of URC/ISTI.

The assessment lasted three weeks (5-23 August 1991), with the two local members of the team starting work one week earlier to identify and contact information sources and collect materials.

The working methodology was based on the Guide for a Preliminary Country Analysis of Activities and Practices Supporting Breastfeeding prepared by Marcia Griffiths for MotherCare. The team reviewed information sources, completed interviews and conducted field visits in La Paz, as well as made visits to Cochabamba and Santa Cruz. Members of the team worked together to review information; they divided the chapters of the guide among themselves to prepare a first draft which they reviewed as a group; findings and recommendations were developed jointly.

The Conclusions and Recommendations which follow are presented in the order of the rest of the chapters in this document.

CONCLUSIONS

Nature and magnitude of the problem of inadequate breastfeeding practices

The fact that the overall duration of breastfeeding is fairly prolonged in Bolivia reflects an environment supportive of breastfeeding. Approximately 71% of children are still being breastfed at 12 months of age. However, negative influences which affect successful, exclusive and prolonged breastfeeding are prevalent and strong, even in rural areas. There has been a documented decrease in the prevalence and duration of breastfeeding in Bolivia over the past decade.

Since breastfeeding is rather ubiquitous for infants in Bolivia, it is easy for many to conclude that there is no need for concern in this area. However, the increasing practice of unnecessarily and prematurely replacing exclusive breastfeeding with partial breastfeeding places many infants at high risk for diarrhea, acute respiratory infections, malnutrition and subsequent death. In contrast to the WHO/UNICEF recommended practice of universal exclusive breastfeeding in infants to 4-6 months of age, scarcely half of Bolivian children age four months and younger are breastfed exclusively. A common practice in Bolivia which interrupts exclusive breastfeeding is the early introduction of teas (e.g., mate de anís), especially by bottle. Suboptimal exclusive breastfeeding has not been well studied, since it is often somewhat masked phenomenon which becomes quantifiable through investigations explicitly designed to ferret out these subtle trends in maternal behavior. More research is needed to document positive and negative factors influencing exclusive breastfeeding in Bolivia to design effective intervention strategies.

In general, mothers seem to understand quite well the importance of breastfeeding, but lack the self-confidence, proper information and close support for dealing with problems. In particular, the influence and negative role of uninformed health personnel is highlighted through the explanations that mothers give for their breastfeeding practices. Although regional and cultural differences in breastfeeding practices are great in Bolivia, a mother who is having trouble breastfeeding, no matter where she lives, is very vulnerable to using breastmilk substitutes as a short-term solution which reduces her milk supply and her baby's desire to breastfeed.

One of the factors considered important for preventing infection and establishing breastfeeding is putting the newborn to the breast as soon as possible after birth. In Bolivia, this practice is not yet widespread. Data from the National Food and Nutrition Institute (1981) show that mothers who started to breastfeed within hours after the birth tended to breastfeed their infants for more months than mothers for whom the initiation of breastfeeding was delayed.

Mothers from urban areas, those from a higher social class and those with a higher degree of education tend to breastfeed their children less and practice partial breastfeeding earlier than other mothers. These urban breastfeeding practices are well known and emulated in the rural sector and thus have a negative influence well beyond their geographical point of origin. Understanding the factors underlying any regional and cultural differences in breastfeeding practices is important for designing possible interventions.

Of special note is the greater acceptance of family planning and the support of the Catholic Church for exclusive breastfeeding as a natural form of child spacing. Since family planning services are now becoming more available to women, they are better able to plan and space their pregnancies. Exclusive breastfeeding has an important role to play in child spacing and now can be more openly discussed in this regard.

Political, legal and financial context

The legal environment -- which includes regulations regarding pre- and postnatal leave, a one-hour break for nursing, and institutionalized day care -- is favorable but the outcome of these

regulations is not at all significant, on the one hand because they are not sufficient, but above all because their application is limited.

The Bolivian Code to regulate the commercialization of breastmilk substitutes was approved by the Ministry of Health but lacks the power of actual national law. The Ministry of Health has recently developed guidelines for breastfeeding. Although these guidelines contribute to a favorable environment for breastfeeding, they suffer from insufficient dissemination and application.

A negative influence on breastfeeding under the Social Security system is the provision, by which mothers receive a "nursing subsidy" of food, including powdered milk, from the fifth month of pregnancy to the child's first birthday. The Multipurpose Project BOL/WFP 2801 (MPSSP 1990) also offers food rations for the last 5 months of pregnancy and the first 5 months postpartum; these rations also include powdered milk. These allocations may induce new mothers, to use the donated milk to directly bottlefeed their newborns to the detriment of breastfeeding, instead of consuming the milk themselves to improve their nutritional status as intended.

No major agency -- governmental, non-governmental, multilateral or bilateral -- has a specific program or budget dedicated to breastfeeding. However, there is increasing national and international attention being given to the topic, which increases the possibility to secure funds for more interventions to address breastfeeding problems. A very positive factor is a local voluntary group called COTALMA (Comité Técnico de Apoyo a la Lactancia Materna - Technical Support Committee for Breastfeeding), comprised of 16 Wellstart graduates. Since its formation in 1989, this group has been involved in the promotion of breastfeeding, with a special focus on training health professionals in Bolivia.

Formal health services

Health workers at all levels, and associated with all kinds of institutions, have been identified as having a major negative influence on breastfeeding. While the health workers' behavior towards pregnant and lactating women is not assumed to be malicious in any way, the difficulties in addressing their inadequate knowledge, poor attitude and lack of positive experience with breastfeeding must be taken seriously.

Negative practices in the majority of hospitals (both public and private) interfere with the successful initiation of breastfeeding and therefore seriously jeopardize the mother's chances to breastfeed at all. Hospital directors exert considerable influence over the support given (or not given) to breastfeeding. For the most part, those health professionals working in the private sector are unaffected by the breastfeeding guidelines issued by the Ministry of Health.

As a result of these factors inherent to the health sector, any lack of confidence in a mother's ability to breastfeed is reinforced by the lack of the right information and support.

Rooming-in, a practice in which mothers and newborns stay together, is prevalent in hospitals, but it is only one of the many necessary conditions for the successful initiation of breastfeeding. A few positive hospital models do exist for specific practices related to breastfeeding, having been influenced particularly by employees who are members of COTALMA. These hospitals are the Hospital San Gabriel with its prenatal counseling program, three hospitals with "kangaroo mother" programs for premature babies and the Children's Hospital for its novel approach to day care.

In this latter case, female staff are allowed to bring their newborns to work and to care for them in their immediate workplace, since there is no day care center per se. The results have been extremely positive: the babies are breastfed and all have remained quite healthy, and the mothers show increased efficiency and dedication to their work with reduced absenteeism. The Children's Hospital also has a breastfeeding clinic, encourages mothers to sleep over with their sick children, and has a unit devoted to training in primary care programs such as control of severe diarrheal disease, acute respiratory infections, and promotion of normal growth and development.

Traditional health services

The majority of deliveries in Bolivia take place in the home, unattended by a trained health worker. A new program by the Ministry of Health is designed to train the husband and other family members in the techniques of a clean delivery.

Training programs for health care providers

Due to the role of health personnel in influencing breastfeeding practices, a major effort must be undertaken to train them in proper lactation management. Fortunately in Bolivia, many key elements for such a training program are already in place. The activities of COTALMA are testimony that training can make a difference in the behavior of entire institutions and the health professionals associated with them. However, in order for COTALMA to expand its efforts in a serious fashion, it must secure financial support and be registered and legally recognized by the Government of Bolivia.

The current university curricula for the health professions are not supportive of breastfeeding. However, a positive example is provided by the University of San Andrés (Universidad Mayor de San Andrés) which has shown that changing the curriculum to support breastfeeding is not a formidable task.

Women's work and support systems

The existence of laws which provide for maternity leave, compensatory time for breastfeeding, and day care support are necessary, but not sufficient conditions to support breastfeeding. These laws need to be enforced, and the women who can benefit from them must be empowered to defend their rights in this regard. Bolivian culture is traditionally not supportive of women's

rights; however, forces from various sectors are addressing this issue, including the model day care program at the Children's Hospital and the international and Bolivian NGOs dedicated to supporting women. The numerous formal and informal women's groups which exist in Bolivia provide considerable potential for introducing proper information and training in breastfeeding management.

Marketing of breastmilk substitutes

The marketing activities of retailers of breastmilk substitutes are both hidden and effective. The Marketing Code for Breastmilk Substitutes may be a useful tool, but in its present form it has enough loopholes to defeat its purpose. Its dissemination and knowledge of its contents are very limited, and it lacks legal enforcement mechanisms. Compliance monitoring is almost non-existent.

Information, education and communication activities

Outside of the health sector, dissemination of information about breastfeeding is not widespread in Bolivia. However, commercial interests in promoting breastmilk substitutes, bottles and other products not conducive to breastfeeding are increasing as the country becomes more urban and more experienced in the use of sophisticated communication technologies.

PROCOSI (Programa de Coordinación en Supervivencia Infantil - Program of Coordination in Child Survival) provides a positive example of coordinated development of educational materials by its PVO members and the Ministry of Health. PROCOSI and its collaborators recently produced a popular manual for the training of field health workers in the basics of breastfeeding management. Any new effort to develop more materials should include a review of the Buena Madre materials and experience from the early 1980s.

The relatively favorable situation of breastfeeding in Bolivia -- in comparison with other countries in Latin America -- may at first seem a reason not to prioritize actions in the areas of protection and promotion of the same. However, there is concern with the current situation since a substantial decline has been documented; everything indicates that if immediate and serious actions are not taken, this trend will be exacerbated, interfering with the efforts to reduce infant morbidity and mortality. Nevertheless, there is a favorable climate for action, encouraged by the activities of COTALMA and institutional models such as the Children's Hospital in La Paz. This is the right time to act while the damage is still limited and therefore reversible. Besides the human and infrastructure resources already mentioned, there is political will within the country as well as support from international sources and from various aid agencies.

RECOMMENDATIONS

The practice of prolonged breastfeeding in rural areas (particularly in the highlands) should be protected. Investigations should be carried out to understand the bases of mothers' behavior and

to provide guidelines to propose changes in knowledge, attitudes and practices that interfere with optimal breastfeeding, especially early initiation and exclusive breastfeeding for 4-6 months. These studies should also include the husband -- the person who assists most deliveries -- and the community. Some priority issues are: the lack of colostrum use, late beginning of breastfeeding, the use of bottles, the reasons behind and potential motivation for changing early or very late weaning, and the prevalence and duration of exclusive breastfeeding.

In order to provide a national administrative structure for new activities to support breastfeeding, the National Breastfeeding Promotion Committee should be reactivated. The COTALMA group should continue to seek funding to maintain its breastfeeding promotion efforts, particularly in the area of sensitizing and training health personnel. The Ministry of Health's national breastfeeding guidelines should be reviewed and disseminated, with the intent of securing their adoption and application at operational levels. If milk powder is distributed as part of food aid programs for women and children, it should be done so in accordance with the guidelines set forth by the United Nations High Commission for Refugees (UNHCR) and that have been adopted by the World Food Programme.

A strategy should be developed to promote curricula and content reviews in Health Sciences education. At the same time, continuing education programs for staff in service should be developed and implemented which focus on the need to extend exclusive breastfeeding and on enabling health workers to more effectively deal with the obstacles to women's breastfeeding. The positive breastfeeding practices currently present in health facilities should be reinforced. The "Ten Steps to Successful Breastfeeding" (1989 WHO/UNICEF) can provide the basis for developing hospital-specific policies, training programs and follow-up activities.

The Bolivian Code for Marketing of Breastmilk Substitutes, in its current version, deserves review and subsequent legal ratification. Its contents should be disseminated, and the mechanisms for monitoring its application strengthened. It is important that the National Committee for Breastfeeding Promotion be in force to achieve these goals.

Strategies and appropriate actions should be developed immediately, taking advantage of the current situation where there is support at the national and international levels. The effort required at this time to achieve favorable results to improve the breastfeeding situation is definitely less than that which will be required within a few years.

**BREASTFEEDING SITUATIONAL ANALYSIS SCORE SHEET
BOLIVIA**

Instructions: Please score each component area in terms of either breastfeeding programs or mothers who breastfeed.

AREA 1 Country background

A. Socio-demographic profile - no score

	high		low	
B. Mortality	(1)	2	3	4 5

	low		high	
C. Contraception	1	(2)	3	4 5

AREA 2 Nature and magnitude of the problem of inadequate breastfeeding practices

	poor		optimal	
A. Breastfeeding practices	1	2	3 (4)	5

	not supportive at all		very supportive	
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B. Mothers' knowledge & attitudes	1	2	(3)	4	5
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C. Household and community members' KAP	1	2	(3)	4	5
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AREA 3 Policy, legal and work environment

	not supportive at all		very supportive	
--	--------------------------	--	--------------------	--

A. National breastfeeding policy	1	(2)	3	4	5
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B. Regulation of marketing and promotion of breast milk substitutes	1	(2)	3	4	5
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C. Women's work environment	1	(2)	3	4	5
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D. Support groups for women	1	2	(3)	4	5
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AREA 4 Health services

	not supportive at all				very supportive
A. Formal health services					
1. Prenatal care	①	2	3	4	5
2. Hospital/clinic deliveries	1	②	3	4	5
3. Immediate postpartum and infant care	1	2	③	4	5
4. Health staff's KAP	1	②	3	4	5
5. Integration of breastfeeding promotion in health programs	1	②	3	4	5

	not supportive at all				very supportive
B. Traditional health care providers					
1. Prenatal care	①	2	3	4	5
2. Deliveries	1	2	③	4	5
3. Postpartum care	①	2	3	4	5
4. Professional association	1	②	3	4	5

AREA 5 Training programs

	not well developed				very well developed
A. Formal health care providers	1	②	3	4	5
B. Traditional practitioners	1	②	3	4	5

	not supportive at all				very supportive
AREA 6 Information, education & communication activities					

A. Overall effort	1	②	3	4	5
			strict		lenient
B. Regulation and policy	1	②	3	4	5

			not well developed		very well developed		
C.	Specific Activities:	mass media	①	2	3	4	5
		interpersonal	1	②	3	4	5
		clearinghouse	1	②	3	4	5
AREA 7	Local financing and donor assistance		1	②	3	4	5

TOTAL: ALL SECTIONS 54

Highest Possible Total : 130

ACKNOWLEDGEMENTS

Many different people and organizations have contributed to the successful completion of the breastfeeding assessment in Bolivia and this report of the assignment. In particular, the co-authors would like to acknowledge the team which undertook the first breastfeeding assessment in the Dominican Republic in June and July 1991. Those persons--Marijke Velzeboer, Josefina Coen, Argentina de Chávez, and Magdalena Fischer--were the first to apply the Guide for a Preliminary Country Analysis of Activities and Practices Supporting Breastfeeding in the field. Their experience and report provided a critical reference point for the team which then went to Bolivia.

Other persons who provided valuable support to the team and/or comments on various drafts of this report are: Mary Ann Anderson, AID/Office of Health; Marcia Griffiths, Manoff Group; Blanca Gunucio, MotherCare/Bolivia; Lani Marquez and Jose Mora, LAC HNS; and Mellen Tanamly, AID/LAC/DR/HPN.

ACRONYMS

ARI	Acute Respiratory Infections
BLS	Baseline Study
CCH	Community and Child Health Project
CDD	Control of Diarrheal Diseases
CIDEM	Centro de Información y Desarrollo de la Mujer (Women's Information and Development Center)
CIES	Centro de Investigación y Educación Sexual (Sexual Education and Research Center)
CINCO	Centro de Investigación y Consultoría (Research and Consulting Center)
CONAPO	Consejo Nacional de Población (Bolivian Population Council)
COTALMA	Comité Técnico de Apoyo a la Lactancia Materna Technical Support Committee for Breastfeeding
DHS	Demographic and Health Survey
EPI	Expanded Program of Immunization
IBFAN	International Baby Food Action Network
IDB	Interamerican Development Bank
IMR	Infant Mortality Rate
INAN	Instituto Nacional de Alimentación y Nutrición (National Food and Nutrition Institute)
INE	Instituto Nacional de Estadísticas (National Statistics Institute)
IUD	Intra-Uterine Device

KAP	Knowledge, Attitudes and Practices
MPSSP	Ministerio de Previsión Social y Salud Pública (Ministry of Welfare and Public Health)
NCHS	National Center for Health Statistics
NGO	Non-Governmental Organization
PAHO	Pan American Health Organization
PROCOSI	Programa de Coordinación en Supervivencia Infantil (Program of Coordination in Child Survival)
PVO	Private Voluntary Organization
SVEN	Sistema de Vigilancia Epidemiológica Nutricional (Nutritional and Epidemiological Monitoring System)
TBA	Traditional Birth Attendant
UMSA	Universidad Mayor de San Andrés (San Andrés University)
UNFPA	United Nations Fund for Population Activities
USAID	United States Agency for International Development
WFP	World Food Programme
WHO	World Health Organization

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INTRODUCTION

The biochemical and immunological characteristics of breastmilk make it an irreplaceable food during the first 2 years of a child's life. Frequent sucking during breastfeeding produces a non-fertile period which may extend child spacing to 18 months or more, constituting truly natural family planning.

Breastfeeding reduces infant morbidity and mortality; its protection and promotion is therefore an important element in child survival programs.

Frequent physical contact between mother and child stimulates the mother-child relationship, decreases the risk of child abandonment or abuse, and promotes the psycho-social development of both child and mother. Early breastfeeding promotes postpartum uterine contraction and reduces blood discharge. Uterine involution and return to pre-pregnancy status are more rapid in lactating mothers than those who do not breastfeed.

Finally, it should be mentioned that breastmilk is the most economical and effective food in the fight against infant malnutrition. This is a significant fact in an underdeveloped country such as Bolivia, with high infant malnutrition rates and restrictions on the availability of low-cost foods with high nutritional value. Promotion of breastfeeding also has a positive effect on foreign exchange, as it reduces the need to import the products and materials necessary for bottlefeeding.

Due to the critical role of breastfeeding in the health of mother and child, USAID issued its Strategy for Breastfeeding (USAID, 1990) and requested that Mission staff, together with country counterparts, review the country's breastfeeding strategy and ways to strengthen it. The Office of Health of the U.S. Agency for International Development in Washington is supporting Missions and countries in these reviews through the MotherCare contract. The country-level assessment of the breastfeeding situation is a first step to developing a comprehensive country plan. MotherCare, in collaboration with other groups, has produced a Guide for a Preliminary Country Analysis of Activities and Practices Supporting Breastfeeding (Griffiths, 1991). Results from the initial country assessments will allow MotherCare to thoroughly review and revise the Guide.

In addition to MotherCare, these assessments undertaken in Latin America are being supported by the Latin America and Caribbean Bureau/Office of Health, Population and Nutrition (LAC/DR/HPN) through their LAC Health and Nutrition Sustainability (LAC HNS) contract. One of the efforts of the LAC HNS contract is to support the development of national breastfeeding programs which will then assist in sustaining overall improvements in child survival and family planning.

The first country assessment using the Guide took place in the Dominican Republic in June and July 1991. The second assessment took place in Bolivia in August 1991 at the request of USAID/Bolivia's Office of Health and Human Resources and is the subject of this report.

Breastfeeding promotion activities in Bolivia have been incorporated in national health and nutrition programs, particularly in relation to the control of diarrheal disease. In addition, various non-governmental organizations (NGOs) and private voluntary organizations (PVOs) supported by USAID are promoting breastfeeding through their programs.

Another important group in Bolivia is the Comité Técnico de Apoyo a la Lactancia Materna (COTALMA - Technical Support Committee for Breastfeeding). This group was founded in 1989 by 16 Bolivian health professionals who attended a lactation management course at Wellstart, in San Diego, CA, USA, in 1988. To date, COTALMA has focused primarily on training health professionals in major urban areas to bring about changes in knowledge, attitudes and practices related to breastfeeding.

Increased attention to breastfeeding is an intervention that can improve the poor health status and survival of the majority of infants and children in Bolivia. Fortunately, there is currently widespread recognition and interest in the positive effects of breastfeeding -- by the government, through its Ministry of Social Welfare and Public Health (Ministerio de Previsión Social y Salud Pública - MPSSP), by local and international non-governmental organizations, by bilateral and multilateral donor agencies, and by key health professionals in COTALMA who work in the public and private sectors. This positive environment for breastfeeding promotion provided a supportive context for the activities undertaken during this national breastfeeding assessment.

The purpose of this country assessment in Bolivia was to: provide a summary of the current situation and programs (what is known or can be documented easily); identify factors which are supportive of or obstacles to breastfeeding; and indicate the gaps which require immediate, direct actions or further investigation.

METHODS

The team for the breastfeeding assessment consisted of: Dr. Andrés Bartos, pediatrician, former Director of the Maternal and Child Health Division of the Ministry of Health, graduate of Wellstart and director of COTALMA; Dr. Mary Ruth Horner, nutritionist and consultant for MotherCare/Manoff Group; and Lic. Gloria Peñaranda, Chief of Nursing at the Children's Hospital in La Paz, Executive Secretary of COTALMA and also a Wellstart graduate. Dr. Bartos and Lic. Peñaranda were hired as consultants for the LAC Health and Nutrition Sustainability contract of URC/ISTI.

The two local team members, Dr. Bartos and Lic. Peñaranda, spent the first week (July 29 - August 2) gathering relevant documents, informally advising key MPSSP officials and other health professionals about the assessment task and obtaining suggestions about other organizations and individuals who should be contacted.

The full team worked together from August 5 to 23, 1991. The breastfeeding Guide (Griffiths, 1991) and the experience from the assessment in the Dominican Republic served as points of departure. The team first reviewed the Guide and developed a list of sources (documents,

specific people and institutions) from which information could be gathered for each section and sub-section. Interviews were subsequently scheduled with government, NGO, PVO and private sector health and development officials.

In order to complement the activities in La Paz, the team visited health facilities in Cochabamba and Santa Cruz. The choice of these two cities was based on their representation of different ecological zones of Bolivia, accessibility, prior knowledge of key institutions and ease of access to them, presence of colleagues to facilitate access to relevant areas of the facility, presence of health personnel who had attended a COTALMA-supported lactation training course in La Paz, and in Santa Cruz, the interest in visiting PROSALUD, a five-year-old organization experimenting with various forms of self-financed health care.

In Cochabamba, the team visited four health facilities: the Maternidad Germán Urquidi (the maternity section of the major MPSSP hospital in the city; approx. 3000 births in 1990), two Social Security hospitals (Caja Nacional de Salud with approximately 2500 births in 1990, and Caja Petrolera de Salud with approximately 500 births in 1990) and one private hospital (Albina Patiño). In Santa Cruz, visits were made to: PROSALUD (headquarters and two health centers - Centros de Salud Villa el Carmen and La Cuchilla; each center has about one birth/day), the maternity section of the major MPSSP hospital (Maternity Percy Boland with approximately 700 births/month in the first six months of 1991) and a periurban MPSSP health center (Centro de Salud Villa Santa Rosita; with approximately 3-4 births/month).

In La Paz, the team visited the Fundación San Gabriel (approximately 1300 births in 1990). See Annex 1 for the list of persons contacted in La Paz, Cochabamba and Santa Cruz.

The team evaluated two basic strategies for obtaining the information relevant to the assessment. One option was to divide the team according to agreed-upon criteria and to pursue specific topics individually, then later to provide the rest of the team with a summary of the information gathered. The other option was, to the extent possible, for the entire team to read the same background information and to participate together in all the interviews and site visits.

The team chose the latter option, i.e., to cover all the same material, interviews and site visits together. The disadvantage of this strategy was that the assessment did not have as much overall breadth as it might have otherwise. However, the advantages more than compensated for this apparent weakness. First, the team had a common body of knowledge available upon which to base its discussions and from which to draw conclusions and recommendations that represented a consensus. Second, the fact that three people participated in a given interview or site visit helped to preserve the team's memory of that experience through subsequent discussion and joint reflection. And finally, even though the team participated together in interviews and site visits, each member made separate observations and had specific insights which added breadth and depth to the common experience.

In order to facilitate the development of the first draft of the report, the Guide was divided up among the team members. Drafts of each chapter were discussed among the team and

subsequently revisions were made. Conclusions and recommendations were developed for each section, first by the author, then revised by the group. Overall conclusions were developed after joint discussion among the team.

In the final week, the team was assisted by Dr. Marina F. Rea, Medical Officer, Diarrhoeal Disease Control Programme, WHO, Geneva, and Dr. Melba F. de Borrero, Diarrheal Disease Control Program, PAHO, Washington, D.C., USA. They participated in interviews with IBFAN and the Director General of Health, MPSSP, and reviewed lactation management activities in various health facilities in La Paz.

Results of the entire assessment process and findings were discussed with USAID/Bolivia and the representatives of WHO and PAHO mentioned above.

I. COUNTRY BACKGROUND

A. SOCIO-DEMOGRAPHIC PROFILE

1. Description of the Country

Bolivia is located in the tropical area of South America. It includes three geographic regions: the highlands (16% of its area), the valleys (19%) and the lowlands (65%). In 1988 the estimated population was 6.4 million people according to the National Survey on Population and Housing, National Statistics Institute (DHS 1989), of which 51% lives in urban areas. The high growth rate for the urban population (4.15% as compared to 1.54% for the rural population) indicates that the latter group, which now comprises 49% of the population, will constitute only 38% of the total in the year 2000. Thirty-eight and forty-two percent of Bolivians, respectively, live in the highlands and in the valleys and 20% in the lowlands.

From an ethnic point of view, there is great diversity. The Aymara and Quechua groups prevail in the highlands and in the valleys: in the highlands, 19% of childbearing-age women speak Aymara and 11% Quechua; in the valleys, 27% speak Quechua (DHS 1989).¹ There are other ethnic groups in the lowlands, but they represent a small percentage of the country's population. For the most part, the Aymara and Quechua people have preserved their language, customs and beliefs in spite of the predominance of the ladino culture in Bolivia. Although these various cultural groups live in relative harmony with each other under one national political system, the indigenous populations maintain their cultural integrity and resist assimilation by the majority.

The illiteracy rate in people over 15 years of age is 18.9%: 7.8% in the urban areas and 31.1% in the rural areas (DHS 1989). Data from the 1989 DHS for childbearing-age women without education indicate 17.5% illiteracy: 8.1% urban and 31.5% rural. There are important regional differences; e.g., the percentage of childbearing-age women without education is 20.3% in the highlands, 19.1% in the valleys and 8.5% in the lowlands.

2. Economic Factors

The average per capita income is US \$570 (State of the World's Children, 1991, UNICEF). The annual growth rate of the Gross National Product has recently changed from negative (-3% in 1985) to positive (+2.5% in 1989), and the projection for 1991 is 3.5%. However, the percentage growth in the Gross Domestic Product declined throughout the past decade. Inflation has been fairly steady for the past several years and is projected at 15% for 1991. The minimum wage is approximately US\$35 per month, with high unemployment and

¹ The National Demographic and Health Survey (DHS) was carried out between February and July 1989 by the National Statistics Institute. 7,923 women between 15 and 49 years of age were interviewed in a national sample. Interviews with mothers provided data related to the health of 5,192 children under five years of age.

underemployment rates. Statistics from official government sources present a different picture, as they report that from mid-1990 to mid-1991, unemployment rates have declined from 11.5% to 8.0%.

The informal economy is a significant aspect that should be considered in the interpretation of figures. Morales (1984) estimated that 80% of the population was under the poverty line, taking into account economic incomes and the cost of family expenses. The economic policy of the last few years has achieved a reduction in inflation rates and has allowed for economic growth in some sectors, but has not achieved a reduction in the gap between rich and poor. On the contrary, this gap is likely to have widened.

The percentage of the national budget allocated to health is approximately 3.6%. The biggest share is for social security and wages. Budget allocations for infrastructure, equipment, and inputs come almost entirely from international cooperation agencies.

As to source of health services for the population, 20 to 30% fall under the Ministry of Social Welfare and Public Health, 20% under Social Security, and 20% under non-governmental organizations and private voluntary organizations (NGOs and PVOs), mainly in the rural areas. A significant percentage of the population lacks access to health services. Private services offer scant coverage, but at present the issue of "privatization" is a focus of debate.

3. Migration Patterns

There is, as in every country, internal migration from the rural areas to the cities. This results in a greater rate of increase in the urban versus the rural population. There is also migration from the highlands to the lowlands, particularly toward the Santa Cruz Department and its capital city, Santa Cruz de la Sierra.

On the other hand, there is a non-quantified migration toward neighboring countries, depending on the economic and working conditions in these different countries.

4. Transport and Communications

Paved roads are limited to the trunk line La Paz-Oruro-Cochabamba-Santa Cruz. The rest of the roads are unpaved and therefore less travelled during the rainy season (December to March). The railway network (developed to transport minerals) is limited to the highlands and parts of the valleys. In the valley areas, the most common modes of transportation are by river and air.

The most important medium for mass communication is the radio. According to the 1989 DHS, 34.2% of national households have radios, 53.1% in rural areas vs. 15.5% in urban. However, in terms of population numbers, the figures are probably higher because of the use of portable radios. As a total, 2.7% of households have TV sets (4.8% in urban areas and 0.6% in rural). Fifty percent of households in urban areas buy a newspaper at least once a week, compared to 9% in rural areas.

5. The Status of Women

An outcome of the economic crisis has been the increasingly active participation of women in the economic support of the family. The literacy rate for women, 65%, is almost equal to the national literacy rate of 73%. Some women work in the formal sector but a larger group is in the informal sector. In addition, women perform their traditional role in household chores and are responsible for child care.

There are several women's organizations. An example is the Mothers' Clubs, which originated through donations of imported food. In several cases, these donations constitute the only reason for these groups to continue to exist, overshadowing their intended purposes and objectives.

Women hold a secondary place in Bolivian society. This fact is reflected in their scant representation at decision-making levels. They are frequently discriminated against in the work place as their productivity is perceived as inferior due to the fact that there are laws that provide for leave (albeit a reduced one) in cases of pregnancy, childbirth, and breastfeeding.

B. NUTRITIONAL STATUS AND MORBIDITY AND MORTALITY

1. Nutritional Status

Anthropometric data from DHS (1989) (weight/age, height/age, and weight/height according to NCHS/WHO/CDC standards) appear in Table 1. Data from the 1989 Nutritional and Epidemiological Surveillance System (Sistema de Vigilancia Epidemiológica Nutricional- SVEN of the Dirección Nacional de Nutrición y Alimentación, MPSSP), agree with those of DHS 1989 and identify as the highest risk zone the highlands located south of La Paz. The valley region is intermediate, and the highest part of the lowlands constitutes an area of relatively minor risk.

The data in Table 1 reflect an overall profile of chronic malnutrition. The prevalence of wasting is low, while that of stunting is very high. The relatively high percentage of children who are already classified as stunted before completing their first year of life may be due to various problems, including low birthweight (prematurity or being small for gestational age affects approximately 15% of all births), inadequate breastfeeding during the first six months and/or inappropriate supplementation (or premature cessation) of breastfeeding in the second semester of the first year.

The substantial increase in the prevalence of underweight children in the second year of life most likely reflects dietary inadequacies during the weaning period which then become permanent growth deficits, especially in height. Besides the effects of age and weaning on malnutrition rates, other risk factors are a birth interval under 48 months, rural residence and a low level of mother's education. All of these findings suggest that growth monitoring programs could play an important role in the early detection of growth faltering and the subsequent interventions to assist mothers in providing their young children with an adequate diet.

TABLE 1

PREVALENCE OF UNDERNUTRITION (Z SCORE \leq 2 S.D.) BY DEMOGRAPHIC
AND SOCIOECONOMIC CHARACTERISTICS

BOLIVIA 1989

	<u>WEIGHT/AGE</u> (underweight)	<u>HEIGHT/AGE</u> (stunted)	<u>WEIGHT/HEIGHT</u> (wasted)
SEX			
Male	15.0	40.2	1.7
Female	11.7	36.3	1.5
CHILD'S AGE			
3-5 months	1.5	7.6	2.8
6-11 months	8.6	20.3	1.2
12-23 months	19.1	42.4	2.1
24-36 months	12.1	50.7	1.0
BIRTH INTERVAL			
Less than 24 months	16.9	43.8	1.2
24-35 months	14.0	42.2	2.0
36-47 months	13.9	44.0	0.9
48+ months	9.3	28.7	1.7
AREA OF RESIDENCE			
Urban	10.7	31.5	1.2
Rural	15.9	45.0	2.0
REGION OF RESIDENCE			
Highlands	13.4	44.0	1.6
Valleys	16.1	40.7	1.5
Lowlands	9.5	21.4	1.7
MOTHER'S EDUCATION			
None	23.1	56.0	2.8
1-5 years	13.1	41.9	1.1
6-8 years	11.3	29.7	1.0
9+ years	6.6	19.9	2.2
TOTAL	13.3	38.2	1.6

Source: DHS 1989

2. Mortality

Although the infant mortality in Bolivia has been declining steadily for the last decade, it remains the highest in the Americas. Reported figures hover around 100 infant deaths per one thousand live births. UNICEF, in the State of the World's Children (1991), reports 105; the SVEN 1989 reports 102; and DHS 1989 reports 96. The dispersion, however, is wide. Thus, it is estimated that in certain regions north of Potosí, the infant mortality rate (IMR) is higher than 300. DHS 1989 reports 172 per 1000 live births as the mortality rate for children under five years of age. Table 2 describes the most frequent causes of death in children under 5 years of age.

Among the maternal biological characteristics associated with IMR, a higher infant mortality rate was noted among children from mothers under 20 and over 35 years of age (DHS 1989). Other key factors include a short birth interval (IMR = 154 for children with siblings under two years of age versus IMR = 43 for children with siblings four years or older) and birth sequence (mortality being higher after the fourth child).

Diarrheal disease is the number one direct cause of death in Bolivian infants during their first year of life. It accounts for 52.2% of the IMR (Table 2) and remains the single most important cause of death of children under five. Acute respiratory infections constitute the second most prevalent cause of death during the first year and particularly during the first month of life.

Some studies report a higher contribution of neonatal mortality within the infant mortality scenario. The National Survival Plan for Infant Development and Maternal Health (MPSSP 1990) notes that neonatal mortality "may represent between 35 to 50%" of infant mortality (page 102). A high mortality rate in home deliveries has been attributed to "negligence" and "decreased temperature" in the baby who is left alone until delivery of the placenta (usually after a long delay). Oxytocin is not used nor is the baby placed at the breast to accelerate the process of delivering the placenta.

TABLE 2

CAUSES OF DEATH IN CHILDHOOD, 1989

Percent distribution of deaths among children born in the five years preceding the survey by age at death, according to main causes of death (mothers' reports)

Main Cause of Death (mother's report)	Age at Death			All Deaths
	Less than 1 month	1 to 11 months	12 months or more	
Birth Problems	32.9	3.8	0.5	13.3
Prematurity	7.7	0.0	0.0	2.7
Tetanus	5.7	2.0	1.9	3.3
Congenital anomaly	1.0	1.1	0.0	0.8
Diarrhea	13.1	39.1	63.8	35.7
Respiratory illness	17.2	25.7	15.9	20.5
Measles	0.2	2.1	1.2	1.2
Other infections	3.1	1.3	1.7	2.0
Other diseases	4.0	4.4	3.1	4.0
Accidents	7.9	8.4	4.8	7.4
No cause given	7.4	12.1	6.8	9.2
Total	100.0	100.0	100.0	100.0

Source: DHS 1989

3. Morbidity

Most studies note that diarrheal disease is the leading cause of morbidity, followed by acute respiratory infections (ARI), both during the first year of life as well as in the period between 2 to 5 years. According to the verbal report from the chief of the ARI Program at the MPSSP, ARI is the leading cause for medical visits, but it mostly constitutes "non-critical ARI," and therefore its contribution to infant mortality is lower.

Immunization coverage for children under 5 has been gradually increasing over the last decade, but compared to other Latin American countries, is still quite low at 41%. Use of oral rehydration therapy is estimated at 34%.

The most common illnesses, according to the Ministry of Health reports, vary according to the child's age. In those under one year of age, gastrointestinal infections prevail (39%) followed by respiratory infections (27.6%). Table 3 describes the percentage of children under 5 years of age with diarrhea or cough during the past two weeks.

C. CONTRACEPTION AND FERTILITY

1. Fertility

The overall fertility rate is 4.9 (DHS 1989), 4.0 in urban areas and 6.4 in rural areas. Since the 1950s, the fertility rate has been relatively stable (official figure from the MPSSP's Dirección Nacional Materno-Infantil was 6.25) up to the period 1980-1984. A significant decrease has been noted since 1985. Family planning organizations have expressed doubt as to the validity of the more recent figures since their programs have low national coverage. However, other factors might have contributed to the fertility decline.

2. Contraceptive Prevalence Rate

Seventy-three percent of women surveyed by DHS know of some contraceptive method. Sixty-seven percent know of some modern method, the most common being the pill, IUD and sterilization. Among the traditional methods (57% know at least one), the best known is periodic abstinence. As for use, traditional methods are more frequently used than modern ones. Table 4 shows the percentage of mothers not susceptible to pregnancy according to months from the last delivery. In reading Table 4, the denominator for the columns labeled "Lactating", "In Amenorrhea" and "In Abstinence" is the number of children surveyed. The denominator for the last column, "Not Susceptible", is a weighted value, taking the other data into account.

As for the use of methods, 20% of all women and 30% of those who are married or living together use some method. Modern methods are used by 8% of all women and by 12% of those married or living together. The most frequent method is the IUD, used by 3.1% of all women, 4.8% of those married or living together. Traditional methods are used more frequently, the

TABLE 3
 PERCENTAGE OF CHILDREN UNDER FIVE YEARS OF AGE WITH DIARRHEA OR
 COUGH AND BREATHING PROBLEMS DURING THE LAST TWO WEEKS

BOLIVIA 1989

	DIARRHEA	COUGH WITH BREATHING PROBLEMS
SEX		
Male	27.5	21.0
Female	28.7	19.8
CHILD'S AGE		
Under 6 months	24.7	22.9
6-11 months	39.4	25.9
12-23 months	41.4	26.0
24-35 months	28.8	19.2
36-47 months	20.8	17.9
48-59 months	14.9	13.5
AREA OF RESIDENCE		
Urban	28.1	21.2
Rural	28.1	19.6
REGION OF RESIDENCE		
Highlands	27.0	17.0
Valleys	29.2	14.5
Lowlands	29.2	35.6
MOTHER'S EDUCATION		
None	28.9	17.3
1-5 years	30.6	22.0
6-8 years	27.0	24.5
9+ years	22.3	17.2
TOTAL	28.1	20.4

Source: DHS 1989

TABLE 4

PERCENTAGE OF LACTATING MOTHERS IN POSTPARTUM AMENORRHEA AND NOT SUSCEPTIBLE TO PREGNANCY BY NUMBER OF MONTHS ELAPSED SINCE THE LAST DELIVERY

BOLIVIA 1989

Months	Lactating	In Amenorrhea	In Abstinence	Not Susceptible
<2	92.0	96.7	86.1	99.2
2 to 3	91.8	85.1	47.3	88.6
4 to 5	83.6	73.3	29.1	78.4
6 to 7	83.6	65.0	20.6	71.9
8 to 9	83.1	60.8	12.7	64.6
10 to 11	77.1	54.6	11.9	56.4
12 to 13	66.7	39.0	11.7	44.2
14 to 15	64.8	25.6	8.6	30.7
16 to 17	45.2	13.4	8.8	20.8
18 to 19	36.9	15.1	8.5	22.0
20 to 21	29.2	13.3	12.1	22.2
22 to 23	22.6	3.1	3.8	7.0
24 to 25	12.4	1.9	7.5	9.0
26 to 27	7.1	2.0	5.1	7.1
28 to 29	3.3	0.3	6.0	6.3
30 to 31	3.0	1.3	4.3	4.3
32 to 33	1.9	0.3	4.3	4.7
34 to 35	1.5	0.3	4.3	4.7
Total	45.0	30.3	15.6	35.5
Average	16.2	11.0	6.1	13.4

Source: DHS 1989

most common being abstinence (used by 10.6% of all women and by 16.1% of married women) (DHS, 1989).

Of all the public or private sources of contraceptives (pills, condoms, diaphragms or injections), the two most frequently used are private physicians and pharmacies. More than 70% of women obtained the pill or the condom in a private medical office or drugstore. Public and private hospitals accounted for approximately 20-25% of the sources for diaphragms and injections. Almost 70% of IUDs were obtained through private medical visits. In 1990 for the first time, the Ministry of Health included the subject of family planning in its National Guidelines (MPSSP 1990) in an explicit form and also established approximately 10 centers in the country through which family planning services are available to the user population. These events were facilitated by the reduced resistance by the Catholic Church to the subject of family planning. Nevertheless, overall coverage of family planning services nationwide is still very low.

Even though women show great interest in knowing about and using traditional and modern methods, in the latter case the husband is a significant obstacle. From the male point of view, use of modern methods permits women to have extramarital affairs, and non-procreation is seen socially as a failure.

Thirty to forty percent of women perceive breastfeeding as a natural method of birth spacing, and indicate it as the reason for prolonged breastfeeding (more than 2 to 3 years in some cases). However, few of these women, nor the health workers who counsel them, are aware of the fact that fertility returns once breastfeeding is no longer exclusive.

CONCLUSIONS

Comparisons of economic statistics from Bolivia with the rest of Latin America continually show that Bolivia is among the poorest, if not actually the poorest country in the region. Key health statistics such as IMR and malnutrition rates in preschool children also confirm this status and depict a grim picture of the overall population.

The status of women is uniformly low among the various ethnic groups in Bolivia, in terms of their educational level and economic opportunity. Although in the past decade women have increased their knowledge about contraceptives, they still are prevented from acting on this knowledge and their own motivation to plan and space their children.

The indigenous Aymara- and Quechua-speaking groups represent a significant ethnic presence in the Bolivian population. Their general geographical and social isolation from the rest of the country inhibit their assimilation into the more prevalent ladino culture. They suffer disproportionately from lack of access to services, as does the majority of Bolivians who are below the poverty line. Positive features about the overall situation in Bolivia are a relatively stable political structure, lack of civil unrest and functioning transportation and communications networks which link the major population areas of the country.

II. NATURE AND MAGNITUDE OF THE PROBLEM OF SUBOPTIMAL BREASTFEEDING PRACTICES

A. OVERALL BREASTFEEDING PROFILE

The data presented in this section provide an overall profile of breastfeeding practices in Bolivia, using results obtained over the last ten years. Where possible, data are disaggregated by variables of interest, e.g., age, geographical region and residence in rural or urban areas. Additional data which help to interpret these findings are presented in Sections B and C.

1. National Profile

Breastfeeding statistics which represent the entire country of Bolivia are available from the 1989 Demographic and Health Survey (DHS). Divided into three age groups for children from 0-14 months of age, these data present the following profile:

<u>Children 0-4 months of age</u>	<u>%</u>
Breastfed exclusively	55
Breastfed + plain water	4
<u>Breastfed + other foods</u>	<u>38</u>
Received any breastfeeding	97
<u>Children 7-11 months of age</u>	
Breastfed + solids (no bottle)	39
Breastfed (no solids)	24
Not breastfed	15
<u>Children 12-14 months of age</u>	
Still breastfeeding	71

In comparison to data from a major study from 1980 (Vera, 1981), the current results from DHS show an overall decline in mean breastfeeding duration in the last nine years:

<u>Age group</u>	<u>Year (% breastfed)</u>	
	<u>1980</u>	<u>1989</u>
6-11 months	91	82
12-23 months	55	45
24-35 months	7	5

More disaggregated data for the DHS study were presented in Chapter I, Section C, Table 4 showing the percentage of children breastfed by two-month intervals.

2. Regional and Rural-Urban Differences

The following table from Vera, 1981, shows large geographical differences in breastfeeding practices in Bolivia.

TABLE 5
PERCENTAGE OF CHILDREN STILL BEING BREASTFED, BY AGE GROUP AND LOCATION OF RESIDENCE, 1980 (N=1633)

<u>Residence</u>	<u>Age of child</u>			<u>Total</u>
	<u>6-11</u>	<u>12-23</u>	<u>24-35</u>	
<u>Urban</u>				
La Paz	85.0	63.0	6.0	46.0
Cochabamba	82.0	23.0	0.0	28.0
Santa Cruz	44.0	24.0	1.0	20.0
<u>Rural</u>				
Highlands	96.0	70.0	9.0	54.0
Valleys	86.0	39.0	5.0	39.0
Lowlands	84.0	39.0	4.0	35.0
TOTAL	91.0	55.0	7.0	46.0

Overall, the prevalence of breastfeeding is highest in the highlands, intermediate in the valleys and lowest in the lowlands. In every section of the country, the prevalence of breastfeeding is higher in rural areas than in urban.

These effects of geographical area and rural-urban residence are confirmed by the more recent data from DHS (1989) which are presented in terms of median duration of breastfeeding:

<u>Characteristic</u>	<u>Median Duration of Breastfeeding</u> (months)
<u>Area of residence</u>	
Urban	15.4
Rural	18.1
<u>Region of residence</u>	
Highlands	19.7
Valleys	16.4
Lowlands	13.2

Data from a 1990 study of 703 mothers in eight urban areas (Bartos, 1990-a) reflects the same regional tendencies as presented above from DHS but a much shorter duration of breastfeeding than the median of 15.4 months for urban areas. For the subsample of mothers who had already stopped breastfeeding, the results by region are:

<u>Region</u>	<u>Mean Duration of Breastfeeding</u> (months)	<u>Sample Size</u>
Highlands	11.0	103
Valleys	7.0	102
Lowlands	4.0	93

3. Effect of Socio-Economic Status

In 1981, INAN studied the effect of socio-economic status on the duration of breastfeeding in three major cities representing Bolivia's three geographical areas:

Mean Duration of Breastfeeding (months)

<u>City</u>	<u>Socio-economic Status (N)</u>		
	<u>Low</u>	<u>Lower middle</u>	<u>Upper middle</u>
<u>Highlands</u>			
La Paz	11.5 (176)	9.2 (55)	6.6 (76)
<u>Valleys</u>			
Sucre	10.3 (125)	8.0 (62)	5.5 (76)
<u>Lowlands</u>			
Trinidad	9.3 (119)	8.8 (45)	3.9 (36)

For each city, the mean duration of breastfeeding decreases with gains in socio-economic status. And, as shown earlier, the mean duration of breastfeeding also tends to decline from the highlands, to the valleys, to the lowlands.

More recent data (Bartos, 1990-a) also show the same effect of socio-economic status on breastfeeding. All children in this study were under 24 months of age. The rural group consists of those mothers who actually live in rural areas, but who came to an urban center to receive health care at the time of the study.

Percentage of Mothers Breastfeeding

<u>Socio-economic status or area of residence</u>	<u>Sample Size</u>	<u>%</u>
Rural	78	62.8
Periurban	125	58.4
Urban		
Low income	204	67.2
Middle income	296	51.4

4. Characteristics of the Mother

Other important variables related to the duration of breastfeeding are the age of the mother and her level of education.

a. Age

Data from the INAN study of La Paz, Sucre and Trinidad (Vera, 1981) showed a general tendency in all three cities for longer breastfeeding by older mothers. These results are confirmed by the data from Bartos (1990-a) which show a marked tendency for older mothers in urban areas to breastfeed longer. Bartos found a mean duration of breastfeeding of 4.2 months among mothers 15-19 years old, contrasted with 9.0 months for mothers aged 35-39 years.

In contrast, the only data from DHS concerning mother's age show that the mean duration of breastfeeding for mothers under 30 years of age is 16.2 months and for those over 30 years is 16.1 months.

b. Education of the Mother

DHS data show a negative correlation between the level of education of the mother and the duration of breastfeeding. For non-literate mothers, the median number of months of breastfeeding was 20.6; for mothers with one to five years of education, 18.3 months; for those with six to eight years, 16.0 months; and those with nine or more years, 11.7 months. An interesting finding from the data of Vera (1981) was that in dispersed rural areas, the level of education of the mother had no effect on the duration of breastfeeding.

5. Initiation of Breastfeeding

One of the factors which is considered important for establishing breastfeeding is putting the newborn to the breast as soon as possible after birth. In Bolivia, this practice is not yet widespread. Data from INAN (Vera, 1981) show that mothers who started to breastfeed within hours after the birth tended to breastfeed their infants for more months than mothers for whom the initiation of breastfeeding was delayed. Combined results for the cities of La Paz, Sucre and Trinidad show:

<u>Hours postpartum when breastfeeding was initiated</u>	<u>Duration of breastfeeding (months)</u>	<u>N</u>
1-4	11.4	82
5-6	10.3	55
7-12	9.3	99
13-24	9.5	304
25 and more	8.8	179

In the COTALMA study (Bartos 1991-b), only 9.7% of the 300 mothers interviewed initiated breastfeeding within the first 30 minutes after birth. Results from the CARE study from the rural district of Iscayachi in Tarija (CARE, 1991) provide explanations for the delay in initiation of breastfeeding. This sample consists of 42 women whose youngest child was born and died between January 1989 and December 1990.

Twenty-one of these mothers did not begin to breastfeed until twelve hours after birth. The most frequent reason for the delay was "colostrum is bad for the baby" (38.1%), followed by "the baby did not want to breastfeed" (28.6%), then "the mother had no milk" (23.8%) and finally, "the baby was sick" (9.5%). These results suggest that the strong tendency to delay breastfeeding is a practice which should be modified to better reflect the international recommendation (WHO, UNICEF, USAID) of beginning breastfeeding within one hour after birth.

6. Introduction of Liquids (Other than Breastmilk), Semi-solids and Solids

A widespread custom in Bolivia is to give some anise tea (mate de anis) to the newborn, as the first liquid, even before breastmilk. The reason for giving this tea is to "clean the stomach" (limpiar el estómago). Even though many mothers follow this practice, it does not imply the beginning of the weaning process. Mothers may introduce tea to the newborn for the special purpose mentioned above with no intention of continuing to give these teas or any other liquids other than breastmilk for the next several months.

Data which illustrate this phenomenon come from a baseline study of four rural communities in La Paz, Cochabamba and Santa Cruz (CCH, 1991-a). A variety of liquids are often given to newborns before breastmilk:

TABLE 6

DISTRIBUTION OF CHILDREN (%) BY COMMUNITY AND FIRST FOOD RECEIVED AS A NEWBORN, 1991

	Ayo-Ayo	Samai-pata	Sacaba	Totora
1. Breastmilk	75	41	75	77
2. Teas	12	41	5	4
3. Milk in a bottle	6	14	10	4
4. Water	0	2	9	13
5. Other	6	2	1	3

These data show that from 23% (Totora) to 59% (Samaipata) of newborns did not receive breastmilk as their first liquid. For this rural sample, these results demonstrate the strong cultural practice of giving teas at a very early age and also the alarming negative trend towards bottlefeeding. Many mothers believe that colostrum is not beneficial for the child. On the other hand, those mothers in this study who did give colostrum gave it to "clean the baby's stomach". This latter group responded that they received no special information from anyone about the importance of colostrum.

The data from COTALMA (Bartos 1991-b) show that during the hospital stay, only 56% of the newborns received breastmilk exclusively, 20% received formula and 24% received sugar water and other liquids.

Additional data from CCH (1991-a) are given below which illustrate that early mixed feeding is prevalent in the rural communities studied. Liquids other than breastmilk are started between 1 and 3.5 months, with solids being introduced shortly thereafter, between 3.4 and 5.5 months.

TABLE 7

MEAN AGE (MONTHS) AT WHICH CHILDREN RECEIVED LIQUIDS OTHER THAN BREASTMILK AND SOLID FOODS, 1991

	Ayo-Ayo	Samai-pata	Sacaba	Totora
1. Liquids	3.5	1.0	3.3	3.0
2. Solid foods	5.5	4.0	4.9	3.4

Data from DHS (1989) show that, by 3-4 months, only 42.7% of babies are exclusively breastfed. The median age for introduction of supplementary liquids is 3.3 months. The trend in urban areas is towards even earlier supplementation: in the study by Bartos (1990-a), 63% of mothers began to give another kind of milk to the newborn by four months of age and 75% had done so by the sixth month.

B. MOTHERS' KNOWLEDGE, ATTITUDES AND PRACTICES (KAP)

Much of the data which describe breastfeeding practices of the mother have been presented in Section A. In this section, besides additional practices, information about the knowledge and attitudes of mothers is provided.

1. Reasons for Stopping Breastfeeding

The table below presents data from the INAN study (as reported by Murillo, 1984) which show a series of reasons why the mothers sampled stopped breastfeeding their youngest child under three years of age.

TABLE 8

REASONS FOR THE COMPLETE SUSPENSION OF BREASTFEEDING, AS
REPORTED BY THE MOTHER, 1984

<u>Reason</u>	<u>%</u>
The time was right	24.8
Insufficient milk	17.8
New pregnancy	13.0
Illness (of mother or child)	10.8
Doctor's order	9.2
The baby refused the breast	8.2
Did not breastfeed at all	6.6
Employment of the mother	5.8
Others	<u>3.8</u>
Total	100.0

In the study by Bartos (1990-a), the main reason given for the cessation of breastfeeding was insufficient milk (40%). The next most frequent reasons were the mother's employment and doctor's advice.

2. Supplementary Foods

A discussion of the introduction of liquids other than breastmilk was presented in section A.6 above. A description of foods given to young children as part of the weaning process is presented below, for the three major regions of Bolivia (MPC, 1981).

In the highlands region, children 6 to 9 months old basically eat starches and cereals, e.g., potatoes, rice, cassava soup and corn flour water, as supplementary foods. Consumption of protein (meat, eggs) and vitamins is very low.

Regarding "frequency of feeding," half the respondents said that the child was fed three times a day; 38% reported twice a day. In general, frequency increases with the growth of the child.

The nutritional quality of these supplemental foods appears inadequate, since consumption of animal products, fruits, vegetables and fat is extremely low and that of legumes is almost non-existent.

In the valleys, rice soup and noodles appear as the supplementary food of choice for almost all age groups. Likewise, tea and coffee are widely consumed within this age group.

Fourteen percent of the answers related to supplementary food for children between 6 and 9 months of age indicate cassava and maize; 9% meat and only 4% for fruit and eggs.

According to surveys carried out in the lowlands, supplementary food for children 6 to 9 months old basically consists of noodles and rice soup (17% of answers corresponded to this type of food). Fifteen percent indicated tea or coffee and 10% bread. Rice and noodles consumption in solid preparations is also significant in this age group (11%).

Data from Bartos (1990-a) show that 42% of the mothers began to introduce supplementary foods by four months of age and 80% had done so by six months of age.

3. Diets of Lactating Women

In the same study by the Ministry of Planning (MPC, 1981), mothers were asked about appropriate foods for breastfeeding women. Results are shown in the following table:

TABLE 9
APPROPRIATE FOODS FOR LACTATING MOTHERS, 1981
(percentage of responses)

<u>Food</u>	<u>Highlands</u>	<u>Valleys</u>	<u>Lowlands</u>
Vegetable or cereal-based soup	36.4	18.5	8.5
Meat soup	36.4	39.0	2.6
Meat, fish, milk, cheese, eggs	6.6	14.1	40.6
Solids	15.4	12.3	10.4
Liquids	---	---	6.0

In the highlands, the greatest number of responses for appropriate foods for lactating women were given for vegetable and cereal-based soups (more than 36%), with a similar percentage for meat soups. In second place, with 15% of responses, were solids and carbohydrates (chuño or

frozen potatoes, bread, corn, cassava, potato, rice, pasta). Only 7% of responses were for foods with a high protein content, i.e., meat, milk, eggs, cheese, fish. The respondents did not consider it very important to consume either vegetables or fruit, which were mentioned in only 0.2% and 1.4% of responses, respectively.

In the valleys, meat soup is named as the most appropriate food for lactating women, with 39% of responses. Vegetable and cereal-based soups were ranked next, with 18% of responses. Liquids, which are so important for nursing women, were not mentioned in either the highlands or the valleys, and were mentioned by only 6% of respondents in the lowlands.

The findings in the lowlands were quite different. In this region, the foods most frequently cited (40% of responses), were: meat, fish, milk and cheese; vegetable constituted 14% of the responses, the same percentage given to "everyday food". Soups earned only 11% of the responses, signaling that they are considered less important than in the highlands.

4. Use of Bottles

The data from the CCH baseline study (1991-a) presented in section A.6 reflect the surprising use of bottles in rural areas. From 4% (Totorá) to 14% (Samaipata) of the newborns received their first food in the form of milk from a bottle. In addition, some of the newborns who received teas (matecitos) for their first food (4-41% of the total sample) also received them via a bottle whereas the rest were given this liquid from a spoon.

Other recent data from the northern part of Potosí and the adjoining part of southern Cochabamba reflect similar practices in the use of bottles in rural areas (PROANDES, 1990). One well-known characteristic of this area is its extreme poverty. The use of bottles was recorded as 14% in Potosí and 31.8% in Cochabamba.

In the PROANDES study, mothers were asked who had given them the advice to use bottles. The most common response was "it was her own idea" (52.4% in Potosí and 75.6% in Cochabamba), followed by "from a family member or friend" (19.0% in Potosí; 22.0% in Cochabamba) and then "a health professional" (28.6% in Potosí; 2.4% in Cochabamba). One can assume quite confidently that only a very small minority of these cases actually required a bottle. These results indicate the urgent need for information about the successful management of breastfeeding and the risks involved in using bottles.

5. Knowledge about Breastfeeding

The study by Bartos (1990-a) included information about mothers' knowledge regarding certain aspects of breastfeeding. In summary, these results are:

- 33% of the mothers knew that exclusive breastfeeding should last from 4-6 months;
- 13% responded that breastfeeding should last for 24 months;

- 66% knew that colostrum should be given to the newborn;
- 33% knew that exclusive breastfeeding is effective as a contraceptive method; and
- 16% of the mothers knew that it is not necessary to suspend breastfeeding in case she became pregnant again.

These relatively high rates of accurate knowledge about breastfeeding can partially be attributed to the characteristics of the sample, as 89% were urban and had a mean (\pm S.D.) number of years of schooling of 9 (\pm 5).

Other recent data about mothers' knowledge, attitudes and practices about breastfeeding are presented in a 1990 study of rural women in Santa Cruz (Frias et al., 1990). This study used the "rapid assessment procedure" and included 17 women in two very small towns. The children in this study were all under two years of age.

A summary of the results showed:

- 94% gave tea (in a bottle) to their newborns before starting breastfeeding; 41% stated that the reason for doing so was to "clean the stomach of the baby" and an equal proportion cited lack of breastmilk;
- reasons for suspending breastfeeding were: mother's illness (29%), child's illness (29%), work (6%), other reasons (12%) and no answer (24%);
- the first foods which should be given to a baby were: soup (76%); puré (29%); fruit (23%); coffee and egg (12%); the family's food (6%) and didn't know (12%);
- 59% of mothers said that breastmilk is sufficient for the baby and 41% said it was not;
- the length of time which was considered adequate to breastfeed was 9 months (12%); 12 months (29%); more than 15 months (23%); until the next pregnancy (6%) and until the baby walks (29%);
- methods given for stopping breastfeeding were: separate the child from the mother (70%); refuse to give the breast and give food instead (18%); apply a special liquid to the breast (6%); and hide the breast (6%); and
- special foods for weaning were: coffee, crackers, rice soup and fruit (29%); goat's milk (6%) and didn't know of anything (65%).

In 1986, UNICEF and El Centro de Investigación y Consultoría (CINCO) collaborated in a study of 425 women of all socio-economic levels in La Paz. Some of the concepts investigated were

about breastfeeding. When asked about the purpose of colostrum, the majority of the mothers (31.1%) were not familiar with it and only 20.9% knew that it was a food.

These mothers were also asked how long a child should be breastfed. Responses were: 18.6% for 6 months; 55.8% for 12 months and 25.2% for longer than 12 months.

When asked what the indications are for suspending breastfeeding, the majority of women (56.2%) knew of none, 17.6% responded "illness of the mother" and 16.0% responded "new pregnancy".

The fact that the majority of these mothers said that they did not know any reason for suspending breastfeeding is not necessarily equivalent to their having said "there is no reason". Nevertheless, mothers who gave this answer may be more likely to breastfeed their children for a prolonged period of time since they see no apparent reason not to do so.

The data presented in this section show that mothers in Bolivia are misinformed about a number of aspects about breastfeeding. Interventions to improve their knowledge will have to identify the mothers' sources of information as part of an educational campaign.

C. KAP OF HOUSEHOLD AND COMMUNITY MEMBERS

The role of the father (or male partner) in the family social structure is similar in Bolivia to that in other Latin American countries. One interesting exception to this general picture is the role that fathers have at the time of birth. As shown in Chapter IV, the father is the person most likely to assist in the birth when it takes place at home. For this reason, the MPSSP has developed educational materials about "clean birth" (parto limpio) and a package of equipment which are designed to help non-health personnel who assist at births. The influence of the father is also described in Chapter IV vis-a-vis persons who give mothers advice about introducing other milks to the newborn.

Other members of the family, particularly the mother-in-law, continue to have significant influence over mothers, especially those having their first child. The extended family is critical for helping provide day care services for mothers who cannot or may not take their children to work with them. In areas where adult members of the extended family cannot take care of an infant, this child is left in the care of the oldest sibling. Besides being deprived of breastmilk, this infant will most likely be subjected to inadequate breastmilk substitutes during the mother's absence.

It is still common practice in rural areas that a newborn will be breastfed by a female relative or friend of the family if for some reason the mother dies or otherwise is not present.

CONCLUSIONS

Many of the results presented in Section A are very positive for the breastfeeding situation in Bolivia, i.e., the vast majority of women breastfeed their children and many of them do so well into the second year of life. However, there are strong negative factors which are affecting this picture. The proportion of children who receive the greatest benefit is declining, i.e., those who are exclusively or nearly exclusively breastfed for the first six months of life, and those who are breastfed beyond this point as they receive supplemental foods. The negative trends that have been documented in Bolivia are similar in many ways to those seen in other countries in Latin America: an overall decline in the prevalence and duration of breastfeeding, especially in urban areas; inverse relationships between breastfeeding and social class and education of the mother; early introduction of other liquids, especially at birth; and distinct regional and cultural differences.

Factors related to the knowledge, attitudes and practices of mothers and other household or community members which are supportive (S) of breastfeeding and those which represent obstacles (O) in this area are:

S: Breastfeeding is a practice which is widely accepted in all strata of Bolivian culture. Breastfeeding is still most prevalent in rural areas and the highlands in general, and most women in these areas tend to breastfeed for at least one year and many do so well into the second year. The challenge in regard to these women is not one to stimulate breastfeeding (as it is already quite prevalent), but to protect the desire and ability to breastfeed and to do it exclusively in the first 4-6 months.

For the valleys and lowlands, the prevalence and duration of breastfeeding have suffered more than in the highlands. In these former areas, interventions to protect and to stimulate breastfeeding are both needed.

S: Many mothers believe that breastmilk is free and convenient, a point of view which is a positive one for mothers who absolutely cannot afford infant formula nor the supplies (e.g., bottles, water and energy source) needed to give it.

O: Some negative practices are actually very rational to women during childbirth and while lactating, e.g., putting the baby aside after a home birth while waiting for the placenta; throwing away colostrum because she doesn't believe it is good for the newborn.

S: Many people working to modify these negative habits appreciate that qualitative research is needed to first understand the behaviors and then to develop viable alternatives for the women; demonstrating the value of the alternative for the women is an effective teaching method.

O: Misinformed, but well-meaning family members who convince a mother she should introduce other liquids and/or food because, in their estimation, she doesn't have enough breastmilk.

O: Widespread early introduction of mate de anis and other teas and liquids undermines exclusive breastfeeding.

O: On some important issues, e.g., introducing a bottle, many women seem to be making the decision for themselves without necessarily seeking advice. The presence of bottles in their community may suggest that this is the normal (though not necessarily the correct) thing to do.

O: The natural tendency for people (in this case girls and women) to want to imitate the practices of higher status women, resulting in the growing trend to introduce bottles and powdered milk and to begin complementary food too early.

O: The common introduction prior to 4-6 months of supplemental foods of low caloric density and protein content negatively affects exclusive breastfeeding and the nutritional status of young children.

RECOMMENDATIONS

Donors, NGOs and PVOs:

1. Operations research can help to investigate which breastfeeding practices are most susceptible to change and, equally importantly, women's feelings about their own self image and the rationale for their practices. Due to the important role of the husband or male partner at the time of birth, these investigations should include this special group. Among those practices which should receive priority attention are: delayed introduction of breastfeeding, non-use of colostrum, too early introduction of teas and other liquids, use of bottles and inappropriate timing (too early or too late) for the introduction of weaning foods.

Government, donors, NGOs and PVOs:

1. The practice of prolonged breastfeeding in rural communities with poor access to formal health services must be protected. Health personnel and decision makers need to acknowledge that, even though breastfeeding is almost ubiquitous in Bolivia and fairly prolonged, there are dangerous trends which are eroding this once very positive situation. There are many very specific actions which can be taken at this point which will support mothers' desires, confidence, capabilities and opportunities to breastfeed. For example:

- Health workers need to be properly informed about the relationship between breastfeeding and fertility.
- Health workers need to be better educated about the availability and use of contraceptives for birth spacing.

Health workers need to be trained in the practical skills of helping mothers to solve their problems with breastfeeding.

While it may be difficult for the government, donors, NGOs and PVOs to make breastfeeding a top priority, they need to understand that it is possible to effectively address some of the current negative trends with fairly modest investments of resources. The motivation to act now must be generated by the understanding that it will be more cost-effective to make these investments in the near future rather than to wait for the situation to become more alarming. Although many of these groups are aware of the importance of breastfeeding and promote it in some way in their programming, there still needs to be at least one group which can be looked upon as the primary national advocate for breastfeeding. Such a group needs qualified personnel, financial resources, motivation and respect in order to fulfill its mandate with the necessary breadth and depth of activities.

More specific details about the nature and magnitude of the support for and obstacles to breastfeeding identified above in the conclusions to this chapter will be presented in subsequent chapters along with specific recommendations.

III. THE POLITICAL, FINANCIAL AND LEGAL CONTEXT

A. BREASTFEEDING POLICY

1. Policy Statements

Many individuals and institutions interviewed do not perceive a real problem in Bolivia with breastfeeding, particularly in rural areas, and especially in comparison with other countries in the region. This perception may explain the fact that there is not a defined policy about breastfeeding. There are laws designed to protect pregnant women and breastfeeding by providing prenatal and postnatal leave (45 days each) and the hour of nursing leave (one hour of leave per day is given to postpartum women up to the first birthday of the child). True application of these regulations depends to a large extent on an agreement between employer and employee. In most cases, pregnant women do not fully use their right to prenatal or postnatal leave because of fear of losing their jobs or of being transferred to a lower position with lower wages. The same goes for the nursing break.

Prior to 1985, the Social Security system provided food supplements to pregnant and lactating women. Since then, the revised national policy states that all employers are directly responsible for providing the following supplements, in cash or in kind:

- for the last 5 months of pregnancy, three 2-kg. cans of whole powdered milk, five pieces of cheese and 2 kg. of iodized salt per month (worth approximately US \$32.43) and

- for the first 12 months of lactation, four 2-kg. cans of whole powdered milk and 2 kg. of iodized salt per month.

These latter foods are intended to supplement breastfeeding, but no specific instructions are given. It is widely believed that many women sell the powdered milk, which is manufactured in Bolivia under the trade name PIL. Given the existence of this program and others which distribute powdered milk to pregnant and/or lactating women, the government should adopt and implement relevant guidelines which have been issued by the United Nations High Commission for Refugees (UNHCR, 1989) on this subject. These guidelines, which have been endorsed by the World Food Programme, UNICEF and WHO, were developed specifically for refugee feeding programs, but are equally relevant for the types of milk distribution programs found in Bolivia. A copy of the guidelines is found in Annex 4.

Employees of the Social Security system itself are provided their supplements in kind, reaching approximately 180 employees per year. There are no data available on other employers. It is suspected that they either ignore the law or provide cash in place of the actual supplement.

The National Plan (1990) includes a chapter on Breastfeeding and Child Nutrition in its second edition (the first edition did not include such a chapter). It takes into account some of the

recommendations included in the joint 1989 WHO/UNICEF document: Protecting, Promoting and Supporting Breastfeeding, also known as "Ten Steps to Successful Breastfeeding" (see Annex 2). The MPSSP chapter includes how to prepare for successful breastfeeding in the prenatal period, early initiation of breastfeeding (during the first hour of life), rooming-in and breastfeeding on demand. It also indicates a period from 4 to 6 months for exclusive breastfeeding and recommends maintaining it (with supplements) "at least until the child is one year old, if possible until two years" (MPSSP 1990, page 137).

In the section related to prenatal care, breastfeeding is not mentioned. Reference is made to breastfeeding in the sections on care during delivery (although it does not appear in the summary of tasks according to level of complexity) and postpartum.

In the chapter related to growth and development, the following growth risk factors are noted: suspension of breastfeeding before 12 months of age (MPSSP 1990, page 131 - the international recommendation is 24 months) and the introduction of supplements (weaning) after six months. Early weaning is not mentioned as a possible risk factor. The Action Plan (MPSSP 1990, pages 144-149) recommends that health workers inquire and give guidance on breastfeeding, exclusively to 4-6 months, and with supplements to 24 months. Clear guidelines on the types of weaning foods are not included.

Sections on severe diarrheal disease and acute respiratory infection emphasize breastfeeding as a preventive measure and suggest general methods for treatment; the recommendations are consistent with the "optimal breastfeeding practices" (Annex 2). The section on Milk and "chicolac" (a chocolate and milk preparation) Centers indicates the age range to be eight months to six years. The objective of these centers is to improve nutrition. The activity consists of providing a glass of milk or "chicolac" and a unit of bread or cornbread to each participant.

As a general rule, health care facilities (hospitals, maternity wards, health centers) do not have their own policy statements about breastfeeding, and application of the national guidelines is limited (see Chapter IV).

2. Information Systems

The available information comes from research carried out by independent groups, from the 1981 INAN investigation, and from the 1989 DHS data. Breastfeeding is not included as an integral part of the Ministry's information system on its activities nor is there any budget allocated to carry out research on the issue.

3. Coordination - National Breastfeeding Committee

The National Breastfeeding Promotion Committee was formed in 1983 with the objective of developing Bolivian Regulations for the Marketing of Breastmilk Substitutes, based on the International Code approved in 1981 by the World Health Assembly. Once its objective was achieved (see Chapter VIII), it stopped functioning. Officials from the Directorate for Care to

Individuals within the Ministry of Health (including the former Maternal and Child Health Directorate) have expressed their willingness to reactivate the Committee's activities. This would not only allow the push for approval of the Code by the Congress but also the review of national guidelines, objectives and activities to protect and promote breastfeeding.

There is no "National Program" or an explicit component to protect and promote breastfeeding, nor is budget allocated for specific actions. There are two lines of thinking on the issue: the most popular one is avoiding the creation of multiple vertical programs (among which breastfeeding would be included as a "program" or "component") in favor of include activities within established programs or components. The other position agrees that a national policy with no program dilutes actions to protect and promote breastfeeding, since no specific training on the issue is provided, nor is application of the national guidelines emphasized within any of the specific sections of the MPSSP. The latter approach proposes the reinforcement of a national component with some specific objectives, a budget and indicators that allow follow up and evaluation activities.

4. Policy Implementation

More than half of the health workers are not knowledgeable of the national breastfeeding guidelines and therefore do not implement them. The Ministry has proposed a program for disseminating the guidelines with training, but this has not yet been implemented and therefore it cannot be evaluated. The medical staff has a short tenure in the district and area health centers, thus decreasing the impact of training unless this is provided on a continual basis.

In an evaluation recently carried out (Bartos 1991-b), it was observed that only 50% of mothers who had received prenatal care were informed of the advantages of breastfeeding or how to start it successfully. The percentage of mothers who had recently given birth that had received accurate indications on the duration of breastfeeding and weaning was less than 50%. Approximately 10% of mothers in this group started breastfeeding during the first half hour of life, and, in total, 38% had started during the first hour. Rooming-in is routine in most services, but the health workers' knowledge about breastfeeding is limited.

While donor agencies express great interest in the issue, actual budget and support depend on specific needs. In the absence of a consistent or integrated plan or program, actions are dispersed and their efficacy is difficult to evaluate. PAHO essentially provides technical assistance in the country, and its financial support is limited. Several agencies such as UNICEF, USAID, UNFPA, IDB, and the World Bank, etc. cover economic, equipment and input requirements to implement programs and activities, besides providing technical assistance.

Non-Governmental Organizations (NGOs) working in the health sector emphasize breastfeeding in their programs, and there is willingness to support it even more. In some cases it is apparent that more scientific information is required to improve the messages. For instance, a person responsible for one NGO had the idea that breastfeeding provides protection against infections

after eight months but that it did not have any nutritional value, and that in the presence of a new pregnancy, it should be suspended.

The Bolivian Pediatrics Society is very active on infant survival issues, including maternal breastfeeding, which was analyzed as an official topic during the National Meetings held in Oruro in 1990. At that time, a Postgraduate Course was offered with the participation of Dr. Audrey Naylor and Mrs. Elizabeth Creer, M.A. from Wellstart (San Diego, USA). The presentations will be published in a supplementary issue of the Pediatrics Journal exclusively devoted to the topic of breastfeeding. The Society has co-sponsored several courses oriented toward health personnel.

The Technical Support Committee for Breastfeeding (COTALMA), formed by Wellstart graduates, has organized several courses for health professionals, which brought about some positive changes in hospital practices and routines, and supported other direct or indirect breastfeeding support activities (see Annex 3).

B. POLICIES RELATED TO MARKETING AND PROMOTION OF BREASTMILK SUBSTITUTES (See Chapter VIII)

C. WORKING WOMEN (See Chapter VII)

D. FINANCING

Even though there is no budget specifically allocated for breastfeeding promotion and protection activities, either in the national budget or by donor agencies, information, education and communication activities of different programs include breastfeeding messages. Donor agencies are willing to provide greater economic support to the extent that concrete proposals are submitted to them.

CONCLUSIONS

For conclusions about laws which refer to women, see the end of Chapter VII (Women's Work and Support Systems); for conclusions about policies related to marketing of breastmilk substitutes, see the end of Chapter VIII (Marketing of Breastmilk Substitutes).

Factors which support (S) the political, financial and legal context of breastfeeding and those which represent obstacles (O) in this area are:

Political and Legal:

S: The Bolivian Code (about commercialization of breastmilk substitutes) was passed in 1984; an interdisciplinary committee (National Committee for the Promotion of Breastfeeding) worked successfully to achieve this end.

O: The Bolivian Code was approved by the Ministry of Health, but is not a national law; it needs to be revised to better restrict the activities of commercial companies. The interdisciplinary committee was disbanded after the Code was approved.

S: The MPSSP has recently established a set of National Standards about breastfeeding, for the first time in Bolivia.

O: These National Standards are incomplete and do not emphasize breastfeeding education and training in prenatal care, nor provide guidelines for weaning. While their existence is a positive factor, these Standards still do not represent a national policy on breastfeeding.

Implementation of the National Standards at the operational level is poor, given the lack of dissemination and knowledge of them, as well as lack of theoretical and practical training for health staff.

O: The National Standards do not include policies regarding the free distribution of powdered milk, from either national or international sources, for pregnant or lactating women and/or preschool children. When this milk is improperly prepared and administered to an unweaned child, the results are very detrimental to the breastfeeding process and to the child's health.

Financial:

O: Even though there are National Standards, they have not been followed-up by creation of a national breastfeeding program with clear objectives, and consequently no governmental budget has been allocated for specific actions.

O: There is no multisectoral information system on breastfeeding activities beyond those systems maintained by individual multilateral agencies, PVOs or NGOs.

O: No bilateral or multilateral agency has a specific program just for breastfeeding in Bolivia.

S: However, some of these agencies are willing to support requests for specific activities related to breastfeeding.

S: WHO, PAHO and UNICEF are currently making breastfeeding a higher priority in their international programs, either as an important intervention in itself (UNICEF) or as an effective means to address diarrhea (WHO and PAHO).

S: The Office of Health of USAID, Washington, DC, has recently secured funding (approximately \$20-30 million) for breastfeeding support programs worldwide. USAID/Bolivia is very interested in addressing health and nutrition problems and requested this breastfeeding assessment to provide input into their planning.

RECOMMENDATIONS

Government, Donors, NGOs and PVOs:

1. Revive, reauthorize and reorganize the National Breastfeeding Promotion Committee, and include as high priority items on its agenda:
 - a. Review and revise the National Standards to include criteria on counseling, follow-up, evaluation and supervision
 - b. Develop strategies to promote dissemination and application of the Standards
 - c. Promote operational research activities to establish priorities for action
 - d. Ensure minimum and consistent training contents for health staff and lay participants
 - e. Develop a plan of action for the creation of a national law to promote and support breastfeeding
 - f. Adopt the UNHCR Policy for Acceptance, Distribution and Use of Milk Products in Refugee Feeding Programmes (see Annex 4) as it pertains to the provision and distribution of powdered milk by international and local donors in Bolivia.

IV. FORMAL HEALTH SERVICES

A. PRENATAL CARE PATTERNS

1. Indicators

More than half of the women surveyed by DHS who gave birth during the last five years did not receive any kind of prenatal care (Table 10).

TABLE 10

PERCENTAGE DISTRIBUTION OF BIRTHS OCCURRING IN THE LAST FIVE YEARS
BY TYPE OF PERSON PROVIDING PRENATAL CARE, ACCORDING TO MOTHER'S
CHARACTERISTICS

BOLIVIA 1989

Mother's Characteristics	Did not Receive	Physician	Nurse	Midwife	Other
MOTHER AGE					
Less than 30	49.6	46.3	2.8	1.1	0.1
30 or more	56.9	38.1	2.0	1.1	1.0
AREA OF RESIDENCE					
Urban	35.8	61.2	1.1	1.3	0.2
Rural	69.1	25.0	3.6	1.0	0.8
REGION OF RESIDENCE					
Highlands	59.6	36.5	2.1	1.2	0.3
Valleys	51.0	43.3	3.1	1.0	0.3
Lowlands	40.8	54.9	3.2	1.2	0.4
EDUCATIONAL LEVEL					
No education	81.5	12.7	2.8	1.1	1.5
Basic	61.8	21.7	3.0	1.6	0.444
Intermediate	35.6	61.8	1.7	0.8	0.0
Middle or more	12.5	85.6	1.1	0.2	0.2
TOTAL	53.0	42.5	2.4	1.1	0.5

Source: DHS 1989

The CCH Project investigated various aspects of health education and health care in the districts where the Project is implemented: Ayo-Ayo, Samaipata, Totora and Sacaba (CCH 1991-b). Surveys were made of childbearing-age women with children under 5 years old, of health personnel, and of municipal authorities of communities in which a baseline survey (BLS) had been carried out (CCH 1991-a).

The total number of women surveyed was: 72 in Ayo-Ayo, 80 in Sacaba, 83 in Totora and 114 in Samaipata. The data obtained with respect to prenatal control are described in Table 11.

TABLE 11
PERCENTAGE OF WOMEN ATTENDING PRENATAL CARE PROGRAM IN FOUR
HEALTH DISTRICTS, 1991

District	Attending	Not Attending	Total
Ayo-Ayo	17	83	100
Sacaba	39	61	100
Totora	51	49	100
Samaipata	49	51	100

CCH 1991

Results coincide with those of the baseline survey except in the case of Totora, where the survey indicates that only 27% attend prenatal care versus 51% in the BLS. The BLS shows that the overall attendance is highest among women less than 20 years old (44%). Among those 20 to 24 years old it is 24%, and among those between 25 and 29 it is 32%.

The 141 mothers who sought prenatal care mentioned different reasons why they did so (Table 12).

TABLE 12

PERCENTAGE DISTRIBUTION OF WOMEN ATTENDING PRENATAL CARE IN
FOUR HEALTH DISTRICTS, BY REASON FOR ATTENDANCE, 1991

District	Improve Health	Problems with Pregnancy	Suggestion from Health Personnel	Number of mothers
Ayo-Ayo	66	26	8	12
Sacaba	48	32	20	31
Totora	76	19	5	42
Samaipata	29	53	18	56

CCH 1991

The 207 mothers who did not receive prenatal care cited mostly that "it was unnecessary." Their idea is that care is only necessary when pregnancy problems occur. Lack of accessibility and lack of confidence were the other reasons. The latter reflects cultural biases of the surveyed population and personal and professional characteristics of health personnel.

2. Protocols

The Ministry of Health Standards (MPSSP 1991) include 21 tasks to be performed during the different visits for prenatal care. Breast examination is not specified nor is breastfeeding counseling part of them, and in the places visited, it was observed that breast examination is exceptional, and breastfeeding counseling is not common. One probable cause is lack of health personnel's knowledge of the issue, and another (in spite of poor compliance with standards in general) is the absence of a specific guide on breastfeeding counseling.

In a survey carried out in July 1991 (Bartos 1991-b) in La Paz, Cochabamba, and Santa Cruz of 300 mothers before hospital discharge, 50% indicated that they were told about the advantages of breastfeeding and 45% said that they received recommendations for successful breastfeeding.

The National Standards recommend monitoring the pregnant woman's nutritional status through measurement of weight and height in each prenatal visit. However, there are no materials for counseling on nutrition in the majority of prenatal medical offices. Anemia prevention is performed through administration of iron and folic acid. As mentioned in Chapter III, some employers provide mothers with powdered milk as part of the breastfeeding subsidy; those mothers who attend Ministry of Health services receive it as part of Project 2801 of the World Food Programme.

The Hospital San Gabriel in La Paz has developed a deserved positive reputation for its care of pregnant women. Hospital officials have determined that pediatricians have a greater interest and openness to training in proper lactation management than do obstetricians. Therefore, contrary to traditional practice, it is the pediatricians at San Gabriel who are charged with giving the prenatal orientation about breastfeeding to pregnant women. In addition, these clients are also informed about family planning services provided by the hospital.

Despite these very positive practices, hospital officials cite the turnover in staff as a constant challenge, since there are always newcomers who have to be trained in the various aspects of proper prenatal, delivery and postnatal care. Another difficulty faced by San Gabriel is that some of the pregnant women who come to there to have their babies have not received appropriate prenatal advice. Therefore, the staff have to address the incorrect knowledge, poor attitudes and negative practices that these women bring with them.

B. DELIVERY CARE PATTERNS

1. Indicators

It is estimated that about 25% of all deliveries nationwide take place in institutions. Some probable factors influencing this low coverage are accessibility, cost, problem-solving abilities, satisfaction with care received, and respect for the pregnant woman's cultural traditions. Table 13 shows the prevalence of deliveries at home versus a health facility and variations due to demographic and socioeconomic characteristics.

Most institutional deliveries take place in Ministry of Health facilities, followed by Social Security facilities and a reduced number at private hospitals. Figures corresponding to delivery assistance provided by a health attendant (Table 13) reflect hospital care and its distribution. Actually, institutional deliveries are all attended by physicians, since there are no nurse-midwives performing those duties within the hospital system.

The percentage of Caesarean sections are generally higher in the private sector. At the institutional level, figures between 15 and 20% can be estimated for the highlands and the valleys, and over 30% for the lowlands (Bartos 1990-b). PROSALUD Health Centers (Santa Cruz de la Sierra) assist only normal deliveries; those mothers with complications or requiring Caesarean sections are referred to Percy Bolland Maternity Hospital. In the above mentioned study (Bartos 1990-b), an important association between type of delivery and duration of breastfeeding was found. Average breastfeeding duration was 5 months for children delivered by Caesarean section versus 9 months for those by natural birth. This difference is attributed to a higher period of mother-child separation and the subsequent use of bottles during the first hours and days of life.

In some Medical Centers such as the Natalio Aramayo Maternity in La Paz, the hospital stay after delivery is about 24 hours or less in normal deliveries and 48 to 72 hours in case of

TABLE 13

PLACE OF DELIVERY FOR BIRTHS BY SOCIO-ECONOMIC CHARACTERISTICS:
 Percentage of births in the 5 years preceding the survey that were delivered in a health facility and the percentage delivered at home (with and without a health attendant),
 by socio-economic characteristics.

BOLIVIA 1989

Characteristics	Delivery in health facility			Delivery at home			Other	No Information
	Public	Private	Total	Health Attendant ^a	No Health Attendant	Total		
RESIDENCE								
Urban	42.3	15.9	58.2	4.6	34.9	39.5	1.9	0.4
Rural	13.6	4.6	18.3	5.3	74.6	79.9	0.8	1.0
REGION								
Highlands	21.4	8.7	30.0	5.0	63.1	68.1	1.2	0.7
Valleys	28.9	10.0	39.0	4.7	54.1	58.9	1.3	0.9
Lowlands	39.5	13.3	52.8	5.2	39.6	44.8	1.6	0.8
MOTHER'S EDUCATION								
None	7.2	0.4	7.6	3.6	87.0	90.6	0.8	1.0
1-5 years	21.7	4.7	26.5	5.8	65.5	71.3	1.2	1.0
6-8 years	46.7	11.8	58.5	5.5	34.2	39.7	1.7	0.1
9 or more	50.4	32.5	82.9	4.1	10.7	14.8	1.8	0.5
TOTAL	27.5	10.1	37.6	5.0	55.4	60.4	1.3	0.7

Source: DHS 1989

^a Doctor, nurse or trained TBA.

Caesarean sections. In general, there is a trend to reduce hospital stay in most public centers; in contrast, in private centers mothers routinely stay 3 days if delivery is normal and 5 days if by Caesarean section.

The prevalence of low birthweight (less than 2,500 grams) is estimated at about 14-15%. However, some major maternities such as Germán Urquidi in Cochabamba report figures of less than 6%.

2. Protocols

There are no standards for breastfeeding or protocols in hospitals different from those of the National Standards (MPSSP 1990). In general, staff are unaware of what is included in the above-mentioned standards, and copies are not easily found in health facilities.

The use of oxytocin and ergometrine to prevent postpartum hemorrhage is common both for those giving birth for the first time and for those who have had previous deliveries. In an unpublished study on public and private hospital practices, 85% of the sample responded that ergometrine is used routinely. This drug can also be obtained over-the-counter. Given that the routine use of ergometrine is an impediment to breastmilk production, an explicit policy needs to be established vis-a-vis the availability and use of this drug.

It is estimated that 80% of public and private institutions practice rooming-in. Ironically, in some hospitals, their critical lack of cribs and/or the mattresses for them forces the mothers to keep their newborns right in the same bed with them ("bedding-in"). However, there is an initial mother-child separation which is usually more extended in cases of Caesarean sections, or if the mother or newborn develops complications. At the private level, use of rooming-in depends on the judgment of the attending physician and on the mother's request. When assessing hospital practices (Bartos 1991-b), it was observed that in 38% of cases breastfeeding started in the first hour of life. This certainly represents progress vis-a-vis the usual practices applied in previous years, which consisted of separation from 4 to 6 hours. Medical instructions from pediatricians used to order the start of oral feeding with glucose after a 6-hour fasting period and only afterwards to start breastfeeding or give breastmilk substitutes. This indication from pediatricians is less and less frequent. However, mothers interviewed in hospitals often buy bottles and administer mate de anis or breastmilk substitutes (particularly in Cochabamba and Santa Cruz) up to the moment when colostrum starts flowing. There are no regulations in those maternity wards visited which forbid the introduction of bottles and breastmilk substitutes by mothers.

Rooming-in is an important hospital practice for supporting breastfeeding, but there are many more practices which a hospital can or cannot support, independently of rooming-in. Some of these other practices are: having a heat lamp right next to the bed where the mother gives birth, so the baby can be cleaned right there and then put to the breast as soon as possible; policies which support breastfeeding in the case of Caesarean and premature births; allowing a lactating mother to stay with her sick child; allowing lactating employees to bring their babies to work;

encouraging mothers to express milk for premature babies or sick newborns; and prohibiting mothers or other families members from bringing bottles to the hospital for the newborn.

Although there is great concern among breastfeeding supporters regarding the trend among mothers not to use colostrum and to administer mates during the first days, there are no studies demonstrating that this practice interferes significantly with breastfeeding or that it provokes infections. This habit, interpreted as cultural and traditional, may have its origin in the routine institutional recommendation of administering sugary solutions to newborns before starting breastfeeding.

Even while rooming-in, if the baby cries it is common for the staff to offer breastmilk substitutes because "breastmilk is not enough," thus reinforcing maternal fears of not having enough milk or that its quality is doubtful. This practice directly interferes with successful and prolonged breastfeeding.

In a survey carried out in July 1991 (Bartos 1991 b), 56% of the mothers interviewed indicated that their child received only breastmilk during the hospital stay; the rest received breastmilk substitutes (20%), sugary water or other fluids (24%).

Even though there are no milk banks in Bolivia, several maternity wards use breastmilk provided by the mother herself to nurse a baby born prematurely or one with a medical condition which prevents sucking from the breast. Manual pumping of breastmilk is preferred. There are some manual collectors for sale, but their availability is limited to two centers in La Paz: the Natalio Aramayo Maternity and the Children's Hospital (COTALMA Breastfeeding Clinic).

There are "Kangaroo Mother Programs" in place at the San Gabriel Hospital and the Health Center No. 1 (MPSSP) in La Paz, at the Germán Urquidi Maternity (MPSSP) in Cochabamba and in a center in Oruro. At the time of this assessment, implementation of a similar program at the Natalio Aramayo Maternity (MPSSP) in La Paz was in progress. The program is based on promoting early discharge of low weight newborns who are in good general condition, along with skin to skin contact with the mother (via a pouch) and exclusive breastfeeding. UNICEF has supported this activity, providing training of some pediatricians in Colombia. Even though experience is limited, results are positive, and this program should be expanded to other centers in the country.

C. PATTERNS OF CHILD CARE

The Standards and the Action Plan (MPSSP 1990) with respect to growth and development and use of the Infant Health Card do not specify the number of check-ups the child should have during the first year of life and thereafter. Weight/height curves used in the Health Card and in the Nutritional and Epidemiologic Monitoring System (SVEN) correspond to those of NCHS (the third percentile for girls and 50th for boys of NCHS constitute the lower and the upper curves, respectively, on the card).

The Bolivian Pediatrics Society (A. Bartos, personal communication) is carrying out a study on growth of children under 6 months with exclusive breastfeeding. Dr. Ana María Aguilar, a Wellstart graduate, coordinates the work at the national level. Results will be presented in Sucre at the time of the National Pediatrics Congress (September 1991). The growth pattern in these children reflects an "S" curve: higher than the reference standard in the first 3-4 months, then dropping below it for a short period of time, then increasing thereafter. This period of apparently slightly slower growth in breastfed children is the reason why some pediatricians recommend early introduction of milk and supplementary foods.

In one study (Bartos 1990-a), it was observed in the surveyed population (703 mothers) that milk products were introduced on average at 3.7 months of age and supplementary foods at 4.1 months. The two most important reasons given by mothers both for weaning and for the introduction of milk products were "lack of breastmilk" and medical recommendations (in that order). Medical recommendations were observed in children under 6 and 4 months of age, which suggest lack of knowledge of national guidelines and/or lack of knowledge and skills to help mothers breastfeed successfully. The national recommendations (MPSSP 1990) emphasize exclusive breastfeeding during the first 4 to 6 months of life, and introduction of appropriate weaning foods after that period, continuing breastfeeding during the first year and if possible during the second.

D. KNOWLEDGE AND PRACTICES OF HEALTH PERSONNEL

There has been growing interest in breastfeeding issues in recent years. The increased information available has had a positive impact on knowledge. However, this information is partial and poorly organized. The great majority of MPSSP health staff (representing all levels of health personnel and all related disciplines - physicians (especially gynecologists, obstetricians and pediatricians), nurses, nutritionists and pharmacists) are misinformed about breastfeeding and not interested in the fact that the decline in breastfeeding is directly related to high infant and child morbidity and mortality rates. Their influence and misinformation covers many areas: e.g., whether the mother should have a Caesarean birth or not; factors which determine a mother's milk supply; contraindications for breastfeeding (e.g., illness of the child or pregnancy or illness of the mother); length of time mother should breastfeed and what, when, how and why other liquids and/or foods should be introduced.

A hospital director with a maternity ward indicated that he is aware of the advantages of breastfeeding and that therefore he promotes it. However, it was observed in his hospital that there was no rooming-in, mother-child separation after delivery was long, there was a milk room, and all babies received breastmilk substitutes or other substances in a bottle during their hospital stay. The nursing staff (nurses and auxiliaries) frequently resorted to the use of bottles when the mother encountered difficulties with breastfeeding. However, under questioning, they indicated without exception that breastmilk is better. None of the mothers using the services of that facility received advice on breastfeeding during the prenatal period.

On the other hand, staff from two centers of the PROSALUD system in Santa Cruz changed the treatment routine after attending a COTALMA course: bottles are not offered to newborns, rooming-in and exclusive breastfeeding on demand are practiced, in addition to barring the introduction of bottles by mothers or relatives. However, a professional emphasized that mate de anís was no longer offered because it was explained in a course that it was not necessary, but they do offer boiled water on occasion. The intention behind the message in the course was to avoid using the bottle, but it was interpreted differently. This points out to the need to review messages and to provide follow-up on the performance of trained personnel.

The Children's Hospital at La Paz -- which has five physicians and a nurse graduated from Wellstart -- encourages female staff with nursing children to bring the child to work, thus maintaining breastfeeding. The Hospital does not have a nursery, and children are kept in any available room. Absenteeism has decreased, there is better dedication to work, and none of the children has suffered from any infection or other disease.

In case of problems related to breastfeeding, such as the child not gaining enough weight, breast occlusion, nipple tearing, etc., there are not enough qualified individuals with sufficient knowledge or experience to solve them. Support groups such as La Leche League are required. However, it is important to train health personnel so that they acquire the necessary skills to successfully handle these situations. It is common that, unable to solve breastfeeding problems, health personnel recommend the use of bottles and breastmilk substitutes.

Although the training experience is still limited, a favorable change has been observed in the practices and attitudes of health personnel attending the different courses sponsored by COTALMA. This, in turn, has brought about a change in hospital routine. As this situation is replicated in university hospitals, the experience of medical and nursing students performing their practices in those centers is also being modified, reinforcing the positive effect from curricula changes.

E. INTEGRATION OF BREASTFEEDING PROMOTION IN HEALTH SERVICES

The MPSSP currently has no program for breastfeeding support. Historically, breastfeeding was with the Nutrition Division and then was moved to the Maternal Child Division. However, when the Maternal Child Division was incorporated into the new Attention to Individuals (Atención a las Personas), breastfeeding as a specific program was discontinued. There is still poor coordination between the Nutrition Division and the separate sections within Attention to Individuals.

On the positive side, however, the current Director General of the MPSSP and his Director of Attention to Individuals are both very supportive of breastfeeding. The National Standards for Child Survival (MPSSP 1990) include breastfeeding, as do some of the MPSSP educational materials. In addition, the MPSSP has competent staff working in specific programs (e.g., CDD, ARI, nutrition education) who are aware of the importance of breastfeeding. However,

it was not possible to assess the extent to which MPSSP personnel actually promote breastfeeding in their day-to-day work.

The degree of compliance with the "ten steps to successful breastfeeding" (see Annex 2) is partial. However, with a structured training program it is completely feasible to attain complete implementation in several maternity centers. Factors favoring this outcome include the increasing practice of rooming-in, the recent trend toward not offering bottles, and staff willingness to promote breastfeeding. The main obstacle is the lack of appropriate knowledge and its application, especially the skills to solve problems when they arise.

There is no information, follow-up, assessment or specific supervisory system on the issue.

Within the private sector, the prevalent concept is that decisions on routine care depend on the attending physician and the mother. Therefore, there is no effort by the practitioners to apply national standards in private maternities. Application of the "ten steps" will, therefore, be more difficult to achieve in the private sector.

F. FAMILY PLANNING

For many years, the Catholic Church effectively prohibited all artificial methods of family planning. In addition, in the late 1960s, the widespread rumor that Peace Corps Volunteers were promoting sterilization created an extremely sensitive climate about the issue. As a combined result of these two factors, NGOs were prohibited in their legal agreements (convenios) from working in family planning until just recently.

Family planning is now included in the MPSSP norms (as of 1990), and at least 10 Unidades Sanitarias (MPSSP health areas) are providing information and services. NGOs are allowed to work in this area in coordination with MPSSP, although many of them are still reticent. In general, the overall climate is more open for discussion about and implementation of family planning projects than has been possible for decades. The role of breastfeeding in these projects is very important because it can be promoted as a good natural method for family planning, as long as it is practiced exclusively. There were no data available to evaluate the new family planning activities of the 10 MPSSP health areas.

Although oral contraceptives are used by only a small percentage of Bolivian women, it should be noted that currently progestin-only pills are not available in Bolivia. Because they are compatible with breastfeeding (and the oral contraceptives now available in Bolivia are not), the UNFPA-PAHO Program which imports contraceptives should make progestin-only or low-dose estrogen pills available in Bolivia.

G. NON-GOVERNMENTAL ORGANIZATIONS

Non-governmental organizations (NGOs) have relatively limited coverage in their health activities and sometimes do not collaborate well with the MPSSP. From the MPSSP's point of view, NGOs have greater resources, they often challenge the MPSSP's authority and create other difficulties because their legal agreements are made with Ministry of the Exterior, not with the MPSSP.

Nevertheless, the MPSSP recognizes that NGOs help to extend the coverage of health services, often to quite dispersed and hard-to-reach rural areas. NGOs work directly with many local level health promoters, and many of these latter people are considered authorities in the area of health in their communities. NGOs are working harder to collaborate with the MPSSP, as evidenced by recent efforts by CARE, CODETAR and the Unidad Sanitaria in Iscayachi as well as the example provided by Project Concern's staff being located within Unidad Sanitaria offices in three departments.

Surveys and reports from NGOs are valuable sources of information about what is happening with regard to health issues in rural and periurban areas. For example, MotherCare is using qualitative research with mothers to encourage positive changes in breastfeeding practices, working with Save the Children in Inquisivi and a group of local NGOs in Cochabamba.

However, not surprisingly, there are reports of conflicting information about breastfeeding being provided by NGOs (as "correct") and that provided to mothers by other health personnel and their families (as "incorrect"). Results described earlier in this section on the KAP of health workers certainly indicate a serious problem vis-a-vis misinformed health personnel. However, the information provided for this section did not specify whether the problem was more prevalent for health workers who work for NGOs or other institutions.

CONCLUSIONS

Factors related to formal health services which are supportive (S) of breastfeeding and those which represent obstacles (O) in this area are:

S: The MPSSP has new norms for breastfeeding included in the national norms for all activities of the MPSSP. These breastfeeding norms are not complete, but they are appropriate.

O: These norms are not at all well known by MPSSP staff and, when known, are not necessarily understood nor followed.

O: There is no real "home" for breastfeeding in the MPSSP, nor is integration of breastfeeding into other health programs clearly evident in breadth and depth.

- O: Negative practices in the majority of hospitals (both public and private) interfere with the successful initiation of breastfeeding and therefore seriously jeopardize the mother's chances to breastfeed at all. The most common explanation for these negative practices by health personnel is their lack of knowledge and experience in and commitment to proper lactation management.
- O: Private doctors and private clinics are not regulated by anyone and therefore their negative practices are difficult to modify.
- O: In government or non-government institutions, the hospital director has considerable influence, regardless of the existence of the MPSSP norms about breastfeeding. Therefore, even if there are staff quite committed to breastfeeding, the hospital as a whole may not support it fully or even partially, given the personal attitudes of the director.
- O: As a general rule, most health personnel, regardless of level or professional experience, do not know how to resolve the most common breastfeeding problems. The major exception to this rule is the group of Wellstart graduates and those who have subsequently been trained by them.
- O: Rooming-in is quite popular in Bolivia and is a practice which is very important for supporting breastfeeding. However, rooming-in is not the answer to many breastfeeding problems, as it is only one of many necessary hospital conditions for the successful initiation of breastfeeding. Even where rooming-in exists, there are many other hospital practices which must support a mother's ability and desire to breastfeed her newborn. Programs for promoting breastfeeding must be aware of the potential for hospital administrators or others to believe that a policy of rooming-in alone is all that is necessary to help mothers learn how to manage breastfeeding.
- S: Positive hospital models do exist for specific practices related to breastfeeding, including the Hospital San Gabriel for prenatal counseling, three hospitals with "kangaroo mother" programs for premature babies and the Children's Hospital for its novel approach to day care.
- O: Mothers rarely seek out trained health professionals for prenatal care, and when they do, breastfeeding promotion is not normally part of the discussion.
- O: Many women in rural areas have no access to health facilities for prenatal, delivery and postpartum care; referral of high-risk cases is impossible.
- S: Poor knowledge and practices of health staff (vis-a-vis breastfeeding) and poorly equipped facilities which do exist in rural areas are not conducive to providing a pleasant experience for pregnant or lactating women - therefore they do not seek out these health facilities. This factor is seen as a positive one, as long as the staff and facilities in these areas are not prepared to support breastfeeding.

RECOMMENDATIONS

Government and donors:

- 1. Continue to encourage and support the practice of rooming-in and help institutions and health workers to appreciate and act on the understanding that rooming-in per se is only one aspect of the comprehensive approach towards the successful initiation of breastfeeding.**
- 2. Promote the development and implementation of breastfeeding standards in accordance with the "ten steps" and with national standards (which should, in turn, be reviewed).**
- 3. Establish a supervision, monitoring and follow-up system for implementation of the above-mentioned standards.**
- 4. Cease the routine prophylactic use of ergometrine.**
- 5. Make progestin-only or low-dose estrogen oral contraceptives available in Bolivia.**

NGOs and PVOs:

- 1. Participate in the development of breastfeeding standards and their promotion and implementation among NGO and PVO health personnel.**

V. TRADITIONAL HEALTH SERVICES

A. PRENATAL CARE PATTERNS

Recent studies carried out (DHS 1989) show that more than half of the births that occurred during the five years immediately preceding the survey did not receive any type of prenatal care, even from a traditional practitioner. The diagnosis carried out by CCH (1991-b) indicates that between 10 and 30% of mothers received prenatal care; those not attending indicated that there was no need. Those attending cited the need "to be in good health", and a lesser percentage, delivery problems.

There are traditional birth attendants (TBAs) in Bolivia, but their activity is limited to delivery, and their participation in prenatal care is low both in the urban and the rural areas. Some of these TBAs have been involved in training programs offered by the MPSSP, NGOs and PVOs, but those reached are relatively few in number and not on any regular basis. There are no midwives in Bolivia. Many people in Bolivia, particularly those in rural areas who are descendants of the indigenous Indian groups, have belief systems which incorporate matters about health into larger concepts of the earth and universe. These people tend to rely on locally credentialed healers, herbalists, or other such "wise men or women" for any needed advice about personal health. Therefore, in these areas, the perceived need for "modern medicine" and its practitioners is very low.

B. DELIVERY CARE PATTERNS

Data from the 1989 DHS certify that delivery at home continues to be the main delivery strategy adopted by the Bolivian population. There, major roles are played by some combination of the family, TBA or other birth attendants, health personnel, and the pregnant woman herself. A total of 60.4% of deliveries take place at home, versus 37.6% in health facilities.

The percentage of home deliveries is higher in rural areas. Baseline Survey (BLS) data (CCH 1991-a) indicate percentages of 94% for home deliveries in Ayo-Ayo, 83% in Totora, 74% in Sacaba, and 63% in Samaipata. The reasons given by mothers in Ayo-Ayo, Totora and Sacaba indicate a preference for assistance provided by a relative. In Samaipata, on the other hand, preference for relatives and traditional birth attendants is about the same. Accessibility to health centers is referred to in similar percentages. In the four districts, results from this study show that the cost of care is not a major cause for not utilizing health services for deliveries.

The husband and other relatives attend most home deliveries, while TBAs attend only a low percentage. BLS (CCH 1991-a) indicates a different behavior in Samaipata where more than 40% of deliveries are attended by physicians and 34% by TBAs. These results indicate that the husband and the TBA provide very important support as human resources in health services and that, once trained, can potentially assist in a clean delivery.

There are currently 1,200 TBAs trained in different health topics. In acknowledgement of the fact that most deliveries in Bolivia take place at home, the MPSSP has developed a training program for those persons (TBAs or relatives or others) who assist at birth. The objectives of this training are to improve the attendants' knowledge and skills in clean delivery and care of the mother and newborn at home. Graphic material has been prepared, published, and distributed in which the proper way to assist a delivery is shown. Follow-up and supervision by health personnel are additional components of this MPSSP program. Likewise, the goal is to achieve adequate and timely referrals to formal services in risk situations and/or when facing complications.

The program covers four modules and is given in three-day periods. The modules cover:

1. Importance of prenatal care with emphasis on recognizing high risk pregnancy or delivery signs or symptoms and referral to the closest health center or post.
2. Methods for a clean delivery at home, for which a basic package with materials is provided, containing the following:
 - soap and brush
 - nail scissors
 - a blanket to receive the child
 - an envelope with gauze and sterile bandages to cut the umbilical cord
 - a razor blade
3. Importance of assistance to the newborn; immediate care.
4. Post-partum care.

Under each of these units, emphasis is placed on the importance of breastfeeding, although activities such as breast examination are not included.

The use of oxytocin and ergometrine are not included in the training program. However, since many drugs can be purchased without a prescription in Bolivia, it is possible that a TBA or other person assisting at a delivery may obtain and administer either of these two drugs.

Several health professionals interviewed mentioned that the baby is often neglected right after birth while delivery of the placenta is awaited. There is a substantial amount of early neonatal mortality attributable to hypothermia and other secondary complications from these patterns of assistance at home deliveries (data from a case control study by MotherCare in Inquisivi).

As for breastfeeding techniques, the idea of not administering colostrum is still favored. The first substance ingested is tea (generally anise) although it has been observed that a bottle filled with urine from the newborn or from a brother is used to "clean the stomach" to avoid "eventual fever" or to prevent the baby from becoming an "overeater". TBAs have scant knowledge as to how to solve breastfeeding problems. In case of breast occlusion, they recommend the application of herbal plasters.

C. POST-PARTUM CARE PATTERNS

When delivery is attended by a TBA, she supervises the postpartum period for several days. In some instances, the TBA moves into the house as an additional member of the family, mostly to monitor the bleeding and help the mother with the newborn's care. Common advice is that the mother drink large quantities of hot fluids to help the breastmilk come down. Generally, TBAs do not take any money for their services but receive payments in kind, depending on the area and the mother's economic situation.

CONCLUSIONS

Factors related to traditional health services which are supportive (S) of breastfeeding and those which represent obstacles (O) in this area are:

O: The majority of deliveries in Bolivia take place in the home, and therefore out of the reach of the formal health system. Although there are traditional birth attendants, and a significant number of them are trained, the coverage they provide is limited since the husband or other family members are more likely to provide assistance at delivery. Under these conditions, a woman's access to adequate prenatal or post-partum care by trained health personnel is extremely limited. Furthermore, from the opposite perspective, the difficulty in reaching the majority of well-meaning, but often misinformed birth attendants presents a significant challenge to the formal health system.

S: The MPSSP has undertaken a program to train TBAs, the husband and other family members in the techniques of a clean delivery. This program can also be used to introduce messages which reinforce early and exclusive breastfeeding.

RECOMMENDATIONS

1. Although prolonged breastfeeding in rural communities is a common occurrence, there are some negative practices which have a detrimental effect on the initiation, frequency and duration of breastfeeding. It is necessary to identify these negative practices and to develop interventions to modify those associated with home delivery and pre-and post-natal care provided by non-health professionals. Since many people in these rural communities have no access to formal health services, other networks and channels must be developed and/or activated in order to inform and train not only rural women, but also their husbands, other family members and community leaders who play key roles in childbirth and subsequent child care.

2. NGOs, mother's clubs and local health committees and health workers (e.g., TBAs) should also be included within community training programs given their roles in providing access to health information and services for rural women in the absence of the MPSSP.

VI. TRAINING PROGRAMS FOR HEALTH CARE PROVIDERS

A. FORMAL HEALTH CARE PROVIDERS

Care for pregnancies, deliveries or newborns is performed at various levels. At the health post, care is provided by a nursing aide; in a medical post by a physician or nurse or nurse auxiliary; and at the health center or hospital by the gynecologist-obstetrician, the pediatrician and the nurse.

University education has been poor with respect to breastfeeding, particularly in the School of Medicine, but also and to a lesser extent, at the School of Nursing and at the School of Nutrition.

The first activity by COTALMA to deal with this problem was a University seminar-workshop held in La Paz in October 1990 for teachers from three universities in the country where Health Sciences are taught (La Paz, Cochabamba and Sucre) and from the Postgraduate Division in Santa Cruz. The objective of the seminar was to assist the participating teachers to develop modifications in their curricula to be discussed and approved in each of the learning centers. These changes were to improve knowledge, attitudes and practices about breastfeeding of future health professionals and to de-emphasize the information related to the use of infant formula.

The conclusions reached at the end of the seminar-workshop were:

- That the schools of medicine at the undergraduate, graduate and post-graduate levels do not apply consistent criteria for teaching breastfeeding, thus the urgent need for revisions in academic programs to include similar issues, objectives, contents, methodology, teaching resources and evaluation.
- That nursing schools have always considered breastfeeding issues within their Maternal and Child programs within the context of community health, even though certain contents could be improved.
- That the curricula of nutrition school programs generally include appropriate content about breastfeeding and integration with nutrition issues.

The recommendations were:

- Revise breastfeeding curricula to be more accurate and consistent; approve the issues proposed in the seminar as the basis for including breastfeeding in graduate training in the areas of pediatrics and obstetrics-gynecology and in the post-graduate studies in medicine.

- In the resident training programs, reinforce knowledge in theoretical and practical issues; carry out bibliographic review and research of breastfeeding practices within the community, hospital and clinics; and prepare a monograph.
- In undergraduate programs, increase the credit hours devoted to breastfeeding and reduce those devoted to breastmilk substitutes.
- In nursing and nutrition, review the curriculum contents.

According to statements made by Dr. Oscar Sandoval Morón, Professor of Pediatrics at the Universidad Mayor de San Andrés (UMSA-La Paz), following the seminar-workshop, the curriculum has been modified at the Medical School of UMSA. Now, of 60 hours devoted to pediatrics, 10% are devoted to breastfeeding issues, i.e., 6 hours, in contrast to the previous curriculum in which only one hour was devoted to breastfeeding and four to breastmilk substitutes. This is an early positive outcome from the workshop. Follow up of the other universities should be carried out.

With respect to resident and graduate programs, the contents of teaching depend on the attitude of the instructor, as well as hospital practices, which are already undergoing positive changes in support of breastfeeding. Counseling on breastfeeding techniques, etc. is included at the Natalio Aramayo Maternity and at the Children's Hospital, which are formal teaching centers. At the latter, there is a growth monitoring program as well as other child survival programs, all of which support practical training at the undergraduate and graduate levels. Similar activities take place, although to a lesser degree, in the other universities.

Thanks to USAID support, a multidisciplinary team of pediatricians, obstetricians-gynecologists, public health physicians and nurses from several health facilities in La Paz travelled to San Diego, California in December 1988 to participate in a two-week course at the Wellstart Breastfeeding Program. Upon their return, this group created the Technical Support Committee for Breastfeeding (COTALMA) with the objectives of sharing their newly acquired knowledge with other members of the health team and the community, modifying hospital practices in favor of breastfeeding, and setting up breastfeeding clinics which could offer services and train health personnel at the same time. Subsequently, approximately 400 health providers have been trained through courses offered by COTALMA. (See Annex 3 for a description of COTALMA's activities).

Most of the activities described in Annex 3 have been implemented without a budget for such purposes, although agencies such as USAID and UNICEF have provided some financial support. One aspect deserving emphasis is that of evaluation and supervision. As part of this breastfeeding consultancy, a visit to PROSALUD (Santa Cruz) was made. The positive results observed were attributed by the interviewees to a course given by COTALMA in 1990 (see Chapter IV). Systematic follow-up should be given to the activities developed by the different teams who undertook the training as well as by teachers, to provide support, particularly in giving courses, and technical support in other areas.

COTALMA has submitted a draft proposal to the Office of Nutrition, AID/Washington, to create a Training Center (Annex 5) to support breastfeeding practices within teaching institutions. The Children's Hospital in La Paz meets several conditions for this purpose: it is a University Hospital with both undergraduate and graduate training in medicine as well as undergraduate levels in nursing and nutrition; it includes programs such as diarrhea management, acute respiratory infections, growth and development, immunizations, accompanying mother (for overnight stays with children), a breastfeeding clinic with an average of 10 daily visits, and a Documentation Center on Breastfeeding. Its positive environment for breastfeeding is confirmed by the female staff who can and do bring their nursing babies to the hospital even though there is no daycare center in the hospital (see Chapter VII).

The COTALMA team has acquired its own experience and skills, deepening their knowledge in different areas both at the theoretical and at the practical level. Their qualifications for providing training are well documented.

At present there is no item in the MPSSP budget exclusively for training, thus making it difficult to develop a continuing education program for health personnel.

During the month of July 1991, a study of hospital practices was carried out (Bartos 1991-b) which constitutes the basis for development of systematic training for health personnel in maternity wards, and can also serve as a baseline for evaluation -- through a similar study in the future -- of the impact of a breastfeeding training program. Preliminary data from this study are discussed in other sections of this document.

As previously described in Chapters IV and V, the percentage of home deliveries is high, and the individuals attending most of these are the husband, common-law husband or other relatives. It is important, therefore, to develop a strategy -- through the program of clean delivery, for instance -- to train this important resource in health care. Anthropological and operational research should be undertaken to discern the reason for certain behaviors (e.g., administration of tea and urine as first food, use of bottles, etc.) and develop programs and training content appropriate for modifying negative behaviors of the target population.

Members of lower social classes tend to emulate the behavior of those from higher classes, and this is an important aspect in the decline of breastfeeding in periurban and rural areas. Some practices considered as "traditional" -- for instance to offer tea or other fluids in bottles during the first days of life -- may date from previous hospital recommendations to "test oral tolerance" by giving glucose water, a very common practice until recently. In fact, bottles are not a traditional element since they became available only at the beginning of this century. Given these considerations, health personnel training and the subsequent change in hospital procedures should have a positive effect on breastfeeding not only within the small population having access to institutional delivery but also over a significant segment of the population that continues with the traditional practice of home delivery due to the imitation and multiplier effects mentioned above.

B. TRAINING OF TRADITIONAL HEALTH CARE PROVIDERS

See Chapter V.

CONCLUSIONS

Training of health personnel is a priority in order to attain changes in attitudes and practices not only in the health services but also amidst the overall population.

Factors concerning training programs for health care providers which are supportive (S) of breastfeeding and those which represent obstacles (O) in this area are:

S: The COTALMA group (comprised of the 16 Wellstart graduates) represents a sufficient core of human resources to undertake the development and implementation of a comprehensive breastfeeding training program. To date, these graduates have undertaken numerous activities to promote, coordinate and lead a nationwide breastfeeding support movement in Bolivia and have developed a proposal (not yet funded) for continued work.

S: The basic infrastructure for training exists: "model" hospitals, a documentation center, teaching materials, administrative structures and a core of professionals (COTALMA) trained in lactation management.

O: COTALMA has no operating budget, as all of its current activities are being handled by volunteers who donate their time and materials. Members of COTALMA have been successful in obtaining contributions in kind, but in order for the organization to flourish, it needs its own budget. The lack of a budget is especially apparent in the areas of supervision, evaluation and follow-up of COTALMA's activities to date.

O: In general, curricula for training health personnel are not supportive: approximately 90% of the Bolivian medical curriculum on infant feeding is information about preparing formula.

S: The Universidad Mayor de San Andrés has changed its curriculum for medical students: the percentage of time during the section on pediatrics which is devoted to breastfeeding has increased substantially and the amount of time devoted to preparing formula is now only minimal.

S: PAHO is working with three medical schools in Bolivia on changes in their curriculum which will better promote the correct knowledge and practice of breastfeeding.

RECOMMENDATIONS

Government, NGOs and PVOs:

1. Design and support a major nationwide training effort to reach a broad range of health personnel with the theoretical and practical aspects of successful breastfeeding management. Focus the first stage of this effort in the teaching hospitals of major cities in order to create the potential for a multiplier effect through the "cascade approach" to training. Incorporate the resources of COTALMA into this training design. Given the resources which already exist for this program, the majority of the budget would be for operational expenses, with special emphasis on supervision, evaluation and follow-up.

Government:

1. Priorities for training should include new health personnel entering the field as well as those already experienced.
2. Priorities for training should be given to health personnel and program supervisors, but the community should also be included, taking into account the important role played by family members in assisting at home deliveries.

COTALMA:

1. Seek funding for an evaluation of the breastfeeding support activities of the 16 Wellstart graduates, from the time of their completion of the course in early 1989 to the present.
2. Similarly, seek funding for an evaluation of the breastfeeding support activities of the people who have been trained in courses which COTALMA has implemented.

VII. WOMEN'S WORK AND SUPPORT SYSTEMS

A. DESCRIPTION OF WOMEN'S WORK

The distribution of employed women throughout various sectors of the workforce in Bolivia is given below (PAHO/WHO, 1985), including data for men for comparison.

<u>Type of economic activity</u>	<u>% of employed population</u>	
	Female	Male
Agriculture, hunting, fishing	26.4	51.9
Manufacturing	17.8	12.6
Construction	0.2	7.2
Commerce, restaurants, hotels	17.0	4.3
Transportation, communication	35.2	15.1
Activities not well defined	2.6	3.9
Persons seeking their first job	0.3	0.5

Approximately 66% of all women in Bolivia over the age of 25 are employed outside the home, as shown in the data below (CONAPO, 1989):

<u>Age group</u>	<u>% of women in the workforce</u>
15 - 19	38.4
20 - 24	53.7
25 - 29	66.7
30 - 34	67.2
35 - 39	69.6
40 - 44	66.7
<u>45 - 49</u>	<u>61.5</u>
Total	57.9

These data suggest that once women enter the workforce, they stay there, regardless of whether their children are very young and require some type of day care or whether they are old enough to go to school.

B. IMPLEMENTATION AND UTILIZATION OF NATIONAL POLICY

1. Maternity Leave

Bolivian law provides the mother with 45 days of leave before the birth and 45 days afterwards. According to the law, this leave cannot be viewed as cumulative, that is, if the mother does not take the entire 45 days in the prenatal period, she cannot add the "unused" days to her 45 days of postpartum leave. In general, there is greater opportunity to negotiate the division and duration of maternity leave in the private sector, if the employer is willing. On the other hand, a woman working in the private sector may be intimidated for fear of losing her job and therefore may not take all the leave allowed by law.

Some women are able to use the law to extend their maternity leave by purposely underestimating the time remaining before delivery and thereby starting their 45 days prenatal leave too early. It is also possible to extend the postnatal period beyond 45 days by declaring that the birth of the child was actually later than it really was. The general consensus of persons interviewed is that, for the majority of women, this law is obeyed as written.

2. Breastfeeding at the Workplace

Bolivian law states that a nursing mother may have one hour during the workday to nurse her child, until the child reaches one year of age. This one hour of compensatory time may be used at the beginning of the day, or the end, or in any other way which is negotiated between the employer and employee. From the point of view of stimulating a sufficient supply of breastmilk, this extra hour in the morning or at the end of the workday is a positive contribution, albeit a minor one, since the mother is still separated from her child for at least the majority of the workday.

Bolivian law also states that any employer with 40 or more female employees must provide day care facilities (guarderías) for the preschool children of these employees. Only a small minority of employers, mostly in the public sector, comply with this law.

In the case of women who work in the informal sector, they are often forced to take their young children to work with them, for lack of access to day care services. One advantage of this otherwise difficult situation is that the mother and child are not separated and breastfeeding is then possible.

Many people interviewed (working women, men, health professionals, etc.) expressed the opinion that the only way to provide breastfeeding opportunities to women who work in the formal sector (i.e., in an "institution", whether it be an office, factory, hospital, etc.) would be to create day care centers at the workplace. They then said that this is a remote possibility, with or without the existence of the law, given the financial implications for the employer. None of them was aware of any employers which provided any other alternative for lactating women other than the extra hour discussed above.

However, there is one example of an alternative which should be studied very closely and publicized. At the Children's Hospital in La Paz, for the last two years, female employees who have a child under one year of age are encouraged to bring the child to work after their 45 days of postpartum leave. The mothers keep their child with them during the day and are thus able to continue to breastfeed. The child accompanies the mother as she moves about the hospital or is temporarily under the care of a co-worker.

Results have been very positive: the absenteeism of new mothers is reduced, as they are able to watch their babies at work; the employees are better able to concentrate on their work instead of "watching the clock" for the time they may leave; and the babies are breastfed more than they would have been otherwise. Furthermore, one finding which is surprising to many is that these babies remain quite healthy, in spite of being in the hospital environment which is typically considered to be unhealthy.

Working women who feel that they have been discriminated against vis-a-vis their rights to maternity leave and/or breastfeeding opportunities at the workplace have little recourse. As individuals, they know that any attempt to take legal action is futile. It is hard to prove that an employer fired or otherwise discriminated against a woman because she was pregnant, nursing or wanted to exercise her rights to breastfeed once she returned to work.

C. AGRICULTURAL AND OTHER NON-FORMAL SECTOR WORK

Although all women are theoretically provided maternity leave, compensatory time for breastfeeding and day care support by Bolivian law, not all of them are able to exercise this right. In this latter group are women who are un-employed and self-employed, e.g., those who work their own land, those who sell fruit on the street corner and many women who work as domestic servants. The ability of these women to breastfeed successfully is prejudiced by their lack of time to rest before and after the birth, the necessity to find someone to care for the baby if they cannot take it to the workplace and the complications caused for the mother if the baby must be taken with her to work.

On the other hand, if the child is close by, the mother may breastfeed at will. For mothers in rural areas, this situation is conducive to prolonged breastfeeding and contributes to the finding that most rural women breastfeed for at least one year and many of them continue well into the second year.

D. WOMEN'S GROUPS

Bolivia is well known for its mother's clubs (clubes de madres) which are especially prevalent in rural and periurban areas. Many of these clubs have existed for 20-30 years. Although these clubs may exist for multiple purposes, the most common characteristic attributed to them is the connection with imported donated food. Much of this food comes from the United States

through its Public Law 480 program and is distributed to mother's clubs via the infrastructure provided by CARITAS. This non-governmental organization is currently working with approximately 2,600 mother's clubs.

While the overall purpose of these clubs is to assist women in their efforts to improve the lives of their families and their communities, the regular provision of donated food has often become the *raison d'être* for their existence. When milk is part of the package for women and/or children, its misuse can have negative effects on the duration of breastfeeding and the overall health of young children. Difficulties arise because, for a variety of reasons, mothers give the milk to their newborns or recently weaned children. In the majority of cases, the poor sanitary conditions under which the milk is prepared and the mother's misunderstanding of how much should be given, and to whom, are contributory causes of premature weaning, diarrhea, malnutrition and even death.

CARITAS is now in the second year of a five-year plan to gradually discontinue distribution of donated foods to mother's clubs. The intent is that the clubs themselves will continue to exist, oriented by the wishes of their members. It is too early to predict the effect of this change on the health of women and children in the clubs. There is also the possibility that other organizations will expand their coverage of donated foods to places where CARITAS has suspended this intervention.

CARITAS is only one of many NGOs that works with women's clubs. Given that this form of organization is very well known in Bolivia, many NGOs organizations include mother's clubs in their implementation strategies. Besides CARITAS, some other NGOs also include donated foods as part of their intervention package. When the NGO is involved in health interventions, breastfeeding may be one of the topics of discussion with women through their clubs. However, for the majority of the NGO programs reviewed, breastfeeding is not a priority topic, although it is encouraged, to a greater or lesser degree, in many projects. (See discussion of PROCOSI's breastfeeding manual in Chapter IX).

One recent development in Bolivia that can have a very positive effect on breastfeeding is the introduction of the term "reproductive health" into discussions about the health of women and children. This term is considered more acceptable than "family planning" due to the widespread and longstanding confusion of family planning as a synonym for birth control. For many years in Bolivia, any attempt to provide family planning services was viewed as a foreign force to control population growth.

There is currently more attention being given to women's health as a topic worthy of consideration per se, instead of indirectly as part of the typical "child survival" package supported by international donors. As an example, in MotherCare/Save the Children's project in Inquisivi, in the Department of La Paz, resources are being applied specifically to study women's knowledge, concerns and practices about their own health.

There are Bolivian NGOs which are devoted exclusively to the concerns of women. For example, CIDEM (Centro de Información y Desarrollo de la Mujer - Center for Information and Development of Women) has been working for eight years in the areas of women's health, legal rights, domestic violence and the promotion of information on these topics. Other institutions which provide family planning services and general support for a variety of women's issues are the Fundación San Gabriel and CIES (Centro de Investigación y Educación Sexual - Center for Sexual Research and Education).

The only support group in Bolivia which is exclusively devoted to breastfeeding is La Liga de la Leche (La Leche League). It was started in the early 1980s and has operated only in La Paz. This group is affiliated with La Leche League International, based in the USA. Its clientele is primarily women of middle to upper class. There are monthly meetings in members' houses where individuals' problems related to breastfeeding are raised and advice and support given. Current plans are to start similar groups in Cochabamba, Santa Cruz and Sucre.

CONCLUSIONS

Factors about women's work and support systems which support (S) breastfeeding and those which represent obstacles (O) in this area are:

- S: The existence of laws which provide for maternity leave, compensatory time for breastfeeding and day care support.
- O: Low levels of familiarity with these laws by women who need the rights they provide; reluctance of women to demand their rights for fear of reprisal; low levels of compliance with these laws, except for maternity leave; lack of penalties for non-compliance.
- O: Employers who effectively use the cost of day care as an excuse not to provide this service to their employees.
- O: Employees, particularly female, who are not well informed of their legal rights and who do not demand open discussion of alternatives with their employers.
- O: The majority of mothers who are most in need of maternity leave are those least likely to be employed in sectors which provide this opportunity.
- O: High percentages of women in all socio-economic groups participate in the work force and abandon breastfeeding upon returning to work after maternity leave.
- S: The longstanding tradition of mother's clubs in Bolivia provides a potential and currently underutilized infrastructure for introducing information about and creating support for breastfeeding.

O: It may prove very difficult to transform the majority of mothers' clubs from their orientation as recipients of donated food to one of general support for women when the rewards of such a change are seemingly less tangible.

O: Women are viewed by society as housewives (amas de casa), not as full-fledged members of the work force; society (men and women) do not support them as having rights as employed persons.

O: Women's feelings of low self-confidence affect their ability to successfully initiate and sustain breastfeeding.

S: There are Bolivian NGOs devoted exclusively to the concerns of women as well as the international breastfeeding support group, La Leche League, which is expanding its current program from La Paz to other cities.

RECOMMENDATIONS

Government, donors, NGOs and PVOs:

1. All persons and institutions interested in supporting breastfeeding in Bolivia should become familiar with the activities of the women's organizations (e.g., CIDEM) which are working to change specific laws in favor of women's rights. The more support these groups have, the greater their potential for bringing about positive change for women.
2. Promote a policy dialogue on liberalizing the interpretation of maternity leave so that mothers can use their allotted 45 days pre-natal and 45 days post-partum leave in a combination of their own choosing during these two periods around the birth of the child. Consider the National Breastfeeding Promotion Committee (if revived) as an appropriate agent for spearheading this dialogue.

NGOs:

1. La Leche League should coordinate its expansion to other cities with persons and organizations there who are also working to support breastfeeding. Their expertise can make a significant contribution to training of trainers and mothers in solving practical breastfeeding problems.
2. Members of COTALMA should take the initiative to demonstrate the day care system which functions in the Children's Hospital in La Paz. As a first step, colleagues who are already supportive of breastfeeding (e.g., the Directors of Fundación San Gabriel, CIDEM, La Leche League, CIES) should be invited, on a personal basis, to visit the hospital for this purpose. Other ways to publicize this successful system are through professional newsletters, journals, meetings and the curriculum for training health professionals. In addition, field trips to the Children's Hospital could be offered as part of the agenda when professionals from the rest of the country (not only those in the health sector) meet in La Paz.

VIII. MARKETING OF BREASTMILK SUBSTITUTES, SUPPLEMENTS, WEANING FOODS, BOTTLES AND NIPPLES OR PACIFIERS

A. NATIONAL POLICY

The Marketing Regulation for Breastmilk Substitutes was approved in 1984 through Ministerial Resolution No. 0067. Its effectiveness is limited because it is not a National Law. Its contents are similar to those of the WHO Code and do not contemplate sanctions in case of non-compliance.

Commercial companies make an effort to comply with the contents of the Code but they violate it through loopholes. Compliance depends mostly on monitoring carried out by groups familiar with it who notify importers when their non-compliance is observed.

B. DISTRIBUTION REGULATIONS

Most infant milk formulas are imported: Nan, Nestógeno, Similac, SMA, S-26, Dano, Morinaga, Nur-Soy. The national product is PRELAC. Nestlé products (Nan, Nestógeno) as well as those from Wyeth (SMA, S-26) and Milupa are prevalent in health centers.

The Ministry of Health must legally approve imported breastmilk substitutes; however, the handling of imports is done through the Ministry of Trade and Industry. A significant volume is smuggled from neighboring countries.

The average price for milk formulas is BOL\$24 (US\$6.50) per one-pound can (powdered) from which 6.3 pounds or 100 ounces can be prepared at an approximate cost of BOL\$3.60 (US\$1.00) per day to adequately nourish an infant during the first months. The monthly cost (BOL\$100 or US\$28) is equal to the Bolivian minimum wage and above this from the second to third months. Consequently, some low-income people do not use the products because they cannot afford them, but at the same time it is a status symbol, and many mothers overdilute them, with negative nutritional consequences for the child.

These breastmilk substitutes are available in all urban centers as well as nearby rural areas. In distant rural areas their availability diminishes.

Pharmacies as well as grocery shops, supermarkets and specialized food stores sell these products. They can also be found in street shops, particularly those that sell smuggled goods.

C. PRODUCTION REGULATIONS

A survey carried out by IBFAN in La Paz and El Alto (IBFAN 1990) indicated that none of the marketed nipples and pacifiers complies with the Code. In addition, breastmilk substitute packages do not comply fully with the recommendations.

Commercial brochures are distributed, particularly to health personnel. There is no indication that free samples are given to mothers in public or private maternity wards, but literature is given in a few private facilities. Samples are offered to health personnel, as well as gifts. Companies offer support for meetings and other professional events (particularly the Pediatrics Society). Products can be introduced subtly. Dano, for instance, offers candies packaged in formula cans.

Nestlé has developed advertising posters promoting breastfeeding (where the company's logo is very much in evidence) as well as posters on promotion and preparation of recipes for breastmilk substitutes. Companies give incentives to pharmacies by way of gifts, documentation, etc., as well as credit sales.

Television advertisements exist for powdered or evaporated milk, but show infants under one year old using the bottle, a practice that does not violate the Code but is subtle and efficient enough to promote the use of bottles and indirectly of milk formulas.

The Director of the Children's Hospital in La Paz (a Wellstart graduate) forbids the entrance of salespersons from milk companies. However, the Hospital accepts some Milupa donations (Pregomin - hypoallergenic formula) to treat certain patients.

The printing and dissemination of the Code has been limited, and most professionals are not even aware of it. In the IBFAN survey, although 37% were aware of its existence, only 15% of those interviewed could explain its contents.

CONCLUSIONS

Factors about the marketing of breastmilk substitutes and related products which are supportive (S) of breastfeeding and those which represent obstacles (O) are:

S: The existence of the Bolivian Code (see conclusions for Chapter III).

O: The Bolivian Code is not well known. It is also deficient in its contents and therefore allows commercial firms to sponsor promotional activities which are detrimental to breastfeeding (see conclusions for Chapter III for more information).

O: Commercial firms which sell breastmilk substitutes, powdered milk, bottles and the like enjoy the absence of any governmental monitoring or penalties for their actions.

S: There are groups such as IBFAN, COTALMA and La Leche League which do monitor the activities of the commercial firms. The former have effected some positive responses by the latter when the latter have been caught in illegal activities.

RECOMMENDATIONS

Government, donors, NGOs and PVOs:

1. Adopt the UNHCR Policy for Acceptance, Distribution and Use of Milk Products in Refugee Feeding Programmes (July 25, 1989) as it pertains to the provision and distribution of powdered milk by international and local donors in Bolivia (see Annex 4).
2. Disseminate copies of the Code widely among health sector administrative and medical staff, and support activities which assist these persons to understand and apply its provisions.
3. Strengthen monitoring groups such as IBFAN, COTALMA, La Leche League, professional scientific societies and universities.

COTALMA:

1. Initiate and coordinate a critical review and revision of the Bolivian Code and encourage Congress to ratify it as a law.

IX. BREASTFEEDING AND APPROPRIATE WEANING PROMOTION THROUGH INFORMATION, EDUCATION AND COMMUNICATION ACTIVITIES

A. OVERALL BREASTFEEDING COMMUNICATION EFFORT

1. General Observations

At the present time, there are no comprehensive national or regional communications programs -- either governmental or non-governmental -- related to breastfeeding. In addition, with the exception of the vertical efforts by La Leche League and COTALMA, the theme of breastfeeding is integrated into other health topics (e.g., CDD, ARI, growth and development, pre- and postnatal care), with varying degrees of visibility. See Chapter IV.E for other comments on integration.

Based on the site visits in La Paz, Cochabamba and Santa Cruz, the most common themes depicted on posters in health facilities were cholera, control of diarrhea, acute respiratory infections, smoking (in the form of No Smoking signs) and preparation of supplemental foods for young children. In the first three cases, the topics seem to reflect the current priorities of the MPSSP (who produced them). In the case of the No Smoking signs, they seemed to reflect the policy of the institution in which they were found. Finally, the posters about supplemental foods for young children (almost all produced by Nestlé), reflected the sustainability of Nestlé's budget to produce these materials and the lack of competition from the producers of other posters. The Nestlé posters mentioned the value of breastfeeding, but in small letters. These posters were often framed with glass and a solid wooden frame which adds considerably to their attractiveness and longevity.

In a few places, La Leche League's poster on breastfeeding was displayed. However, several interviewees noted that it was not an effective poster since it was filled with too many small pictures (the left half) and too many words (the right half). In several places, two different UNICEF posters were displayed, but these posters were produced a number of years ago and are no longer available.

In one hospital, there were two handmade posters on the wall in one postpartum ward. The information provided was a list of recommendations about breastfeeding, with no pictures nor diagrams. In contrast to the majority of health facilities with little or no promotional materials, the Fundación San Gabriel has one room with a variety of attractive handmade and mass-produced posters about breastfeeding on the walls. This room is used by hospital staff, including a Wellstart graduate, when consulting with mothers in their postnatal visits.

As for radio and television, there were no breastfeeding messages being transmitted at the time of this assessment. MPSSP staff indicated that cost was the major deterrent to using this form of promotion for breastfeeding. In contrast, many people were familiar with radio and television messages which promote powdered milk and baby bottles. For more discussion about this topic, see Chapter III.

2. Specific Organizations

Within the MPSSP, the responsibility for developing promotional and educational materials is with the Social Communications section. This group does not have its own budget, but provides its services upon request from other departments which can finance the desired products. There has been no production of specific breastfeeding materials in the last several years since there is no distinct breastfeeding program within the MPSSP and since no other department has requested the production of any materials or messages exclusively related to this topic.

Among multilateral donors, PAHO, WHO and UNICEF have been supportive of breastfeeding efforts in Bolivia. PAHO's assistance is primarily through its advisors, while UNICEF's assistance has been broader. Although UNICEF does not have a budget specifically for breastfeeding activities, it does support the production of breastfeeding communications materials when requested and approved by another organization. The Nutrition section of the MPSSP is currently developing a proposal for UNICEF which, among its priority topics, will include financial support for communications materials for breastfeeding.

Not surprisingly, NGOs develop their own materials with their own resources. Based on the information gathered for this assessment, there were no reported examples where these materials provide misinformation or conflicting information about the topic of breastfeeding. This positive situation is more attributable to coincidence than to any specific regulation or deliberate effort on anyone's part.

Nevertheless, there is good coordination of efforts in the production and use of materials about breastfeeding by the members of the Programa de Coordinación en Supervivencia Infantil (Program of Coordination in Child Survival - PROCOSI). One example is the health promoter's guide about breastfeeding produced in July 1991. The information included is accurate and presented in an easy-to-read format. This guide has been distributed to all 10 of PROCOSI's member organizations and an additional 500 copies were requested by CCH. PROCOSI's network consists of 10 private voluntary organizations supported by child survival funds from USAID.

Some of the other activities and materials developed by PROCOSI about breastfeeding include:

- integration of breastfeeding themes in promoters' guides about ARI, CDD and EPI;
- educational game about breastfeeding, developed with the MPSSP with financial support by UNICEF and PROCOSI and technical assistance from COTALMA;
- a family register of key events (almanaque de registro familiar) developed with assistance from CARE, which is a calendar with pictures to help a mother register actions she takes when the child has diarrhea or a respiratory infection or when she is introducing new foods or taking the child for growth monitoring. All of these four topics include pictures of breastfeeding. Based on the positive experience of the pilot phases, there are plans to expand the use of this instrument.

Another document which contains correct and appropriate information about breastfeeding is Lactancia Materna: Guía para Personal de Salud (Breastfeeding: Guide for Health Personnel). It was adapted and produced in Peru by the Academy for Educational Development, the Universidad Peruana Cayetano Heredia, the Asociación Perú-Mujer (Peruvian Mother's Association) and the Population Council (Academy for Educational Development, 1989). It was distributed to the staff of PROSALUD during their training by COTALMA and is also used by CCH.

Although the interviews focused on recent materials about breastfeeding, there is an earlier experience in nutrition education which deserves mentioning in this context. In the early 1980s, the Ministry of Health and USAID/Bolivia collaborated in The Nutrition Education by Mass Media Experimental Project (which was known locally as Buena Madre).

The designers of the project decided that all efforts would have to be adapted for the three different geographical and cultural areas of Bolivia -- the highlands, valleys and lowlands. A preliminary step was an extensive investigation into mothers' knowledge, attitudes and practices about breastfeeding and other aspects of child care. With this information in hand, an education and communications strategy was developed which included regional-specific flipcharts, manuals, posters, recipes and radio spots and stories about breastfeeding, supplementary feeding, infant diarrhea and goiter. All materials and messages were produced in Aymara, Quechua and Spanish.

An evaluation of the project in May 1982 determined that the effort had been successful and it was recommended by the National Nutrition Seminar as a model for nonformal nutrition education. Some of the professionals who participated in this project are still working in nutrition education in Bolivia, but no one interviewed mentioned this project nor the materials developed by it. Given the resources invested in the Buena Madre project in background information gathering and analysis, strategy development, and production and use of materials in three languages, it seems appropriate that serious attention should be given to this prior experience in the course of considering any new educational efforts related to breastfeeding.

Three of the organizations visited (UNICEF, MPSSP and PROCOSI) have professionals on their staff who are specialists in communications. This is a positive factor in support of continuing efforts to promote breastfeeding.

B. COMMUNICATION REGULATION AND POLICY

The communications activities of commercial firms which sell infant formulas and bottles are not regulated to any degree by the government (Zubieta et al., 1991). The result is most visible in print media. These firms advertise primarily in scientific literature, however, their advertisements are prohibited in the Bolivian Journal of Pediatrics (Revista de la Sociedad Boliviana de Pediatría). See Chapters III and VII for further discussions of government regulations and policy regarding commercial products for infant feeding.

There seems to be no general reticence to or prohibition about exposing the breast in print materials. In the PROCOSI manual, for example, there are many pictures of the breast including some showing how to prepare the nipples for breastfeeding.

C. SPECIFIC ACTIVITIES

1. Mass Media

The topic of breastfeeding and infant foods is not overwhelmingly prevalent in the mass media. However, the print and TV display of mothers of supposedly upper class with their babies and bottles is widespread enough to cause health professionals to list this promotion as a very negative force against breastfeeding. In addition, the pictures of babies and baby bottles on infant products sold in stores of all sizes, in rural as well as in urban areas, creates unrealistic expectations for mothers unable to afford these baby items or unable to use them properly.

2. Interpersonal or Face-to-Face Communication

In the case of health professionals (of all levels), face-to-face communication with mothers or mothers-to-be is most often made without the use of printed materials. The professional relies on memory to provide information about breastfeeding. The content of this counseling and its degree of accuracy are discussed in Chapter IV.

In women's groups organized by Bolivian NGOs, international NGOs or PVOs, the person most likely responsible for communicating information about breastfeeding is the health promoter and to a lesser extent, the health specialists employed by these groups.

3. Documentation Centers about Breastfeeding

Nearly all the organizations visited had their own libraries or resource centers. In La Paz, of particular note for their quantity and variety of materials related to breastfeeding are the resource centers of the CCH project, COTALMA, PAHO, PROCOSI and UNICEF.

CONCLUSIONS

Factors which support (S) appropriate information, education and communication activities for breastfeeding and weaning and those which represent obstacles (O) in this area are:

O: Diffusion of information about breastfeeding is not widespread in Bolivia, from either the positive point of view (i.e., correct information presented in appropriate ways to relevant groups) or in negative (incorrect or inappropriate information provided mostly by firms which sell infant formula or baby bottles). However, actions must be taken to try to curb the growing influence of commercial interests, as they are directly related to the overall decline in breastfeeding and the inappropriate introduction of supplementary foods.

O: Dissemination of information about breastfeeding is restricted - Wellstart graduates receive theirs, and UNICEF, PAHO and CCH have libraries, but many other interested people have little or no access to relevant and current information.

O: A major influential force against breastfeeding is the understandable tendency of the majority of the female population to aspire to and imitate the practices of upper class women. This desire is fueled by direct observation as well as by images disseminated through all types of media.

S: PROCOSI provides a positive example of coordinated development of educational materials by its members and the MPSSP. This system could be useful for other organizations that develop materials for a broad range of members and topics. PROCOSI, as well as other groups visited, takes care to develop its materials with the collaboration of the population to be served.

O: There seems to be no current use of the materials developed by the Buena Madre project, even though it had been recommended as an exemplary national model.

S: As determined by the Buena Madre project in the early 1980s, radios are quite widespread in rural areas and, in 1991, they continue to present a potential means of communication about breastfeeding.

RECOMMENDATIONS

Government, donors, NGOs and PVOs:

1. Given the current void of a well-formulated communications strategy for breastfeeding promotion and education, a newly revived National Breastfeeding Promotion Committee should take up this topic as a high priority. Considerable experience from other countries (e.g., the mass media campaign from Brazil) as well as from within Bolivia itself (e.g., the Buena Madre project) should be reviewed for appropriate inclusion and adaptation into Bolivia's communications plans. These plans must fulfill two objectives: to raise widespread consciousness about breastfeeding and to create motivation for positive behavior change among various segments of the population.

Any mass media campaign must consider the necessity of reinforcing messages by additional face-to-face communication between the health provider (or informant) and the mother (or person for whom the message is intended). In addition, any communications strategy must take the special ethnic characteristics of Bolivia into consideration. Finally, since the practices of middle and upper class mothers are often copied by women of lesser status, positive breastfeeding images from the former group must also be included in a communications strategy.

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ANNEX 1

LIST OF PERSONS INTERVIEWED

La Paz

A.I.S. (Acción Internacional por la Salud)

Dr. Norma Murillo Q., Calle Loayza - Esq. Camacho, Edif. Mcal. de Ayacucho - 7th floor, room 705, La Paz. Tel: 371596.

CARE International-Bolivia

Frank Sullivan, Director and Gerardo Romero G., Project Manager, Av. 14 de Septiembre 5369, Obrajes, La Paz. Tel: 786341.

C.C.H. (Community and Child Health Project, MPSSP and USAID/Bolivia)

Dr. Alvaro Muñoz-Reyes N., Executive Director; Ms. Rita Fairbanks, Deputy Director; Lic. Elizabeth de Frías, Consultant and Dr. Jorge Velasco, Health Education Consultant, Calle Goitia 142, Sopocachi, La Paz. Tel: 325384; Fax: 591-2-391503.

CIES (Centro de Investigación y Educación Sexual)

Lic. Luisa Rada, Director, Galeria Colonial Calle Colombia, 257, Sopocachi, La Paz. Tel: 390011.

CIDEM (Centro de Información y Desarrollo de la Mujer)

Carola Muñoz Vera, Director General, Calle Aspiazu No. 736, Sopocachi, La Paz. Tel: 374961.

Fundación San Gabriel

Dr. Liselotte de Barragán, Executive Director and Dr. Luis Montaña, Pediatrician, Villa Copacabana, Av. Tito Yupanqui, La Paz. Tel 331114.

La Liga de la Leche

Dr. Carola Beck, Director, Te 791699.

MotherCare

Lic. Lisa Howard-Grabman, Program Coordinator, 20 de Octubre 2463, Sopacachi, La Paz. Tel: 325514 and Patricia Taylor, Director of Long Term Projects, MotherCare, John Snow Incorporated, 1616 N. Ft. Myer Drive, Arlington, VA 22209, USA.

MPSSP (Ministerio de Previsión Social y Salud Pública)

Lic. Ana María P. de Villarreal, Jefe Nacional del Dpto. de Comunicación Social, Capitán Ravelo 2199, Tel: 390846.

Dirección de Atención a las Personas:

Dr. Martha Mejía, National Chief of Infant Health; Dra. Miriam Lopez, National Chief of the Control of Diarrheal Diseases; Dr. Marcia Ramirez, Chief of the National Growth and Development Program; Dr. Alberto de la G. Murillo, Chief of the National Maternal Health Program; Enf. Norma Quispe, National Chief of Maternal Child Nursing; Unidad desconcentrada del MPSSP, Capitán Ravelo 2199, Sopocachi, La Paz. Tel: 375479.

Lic. Albina Torrez, Chief. Department of Nutrition, Dirección de Atención a las Personas, MPSSP. Edificio La Lotería. Tel: 375479.

Escuela Nacional de Salud Pública, Enf. Juana de Rojas, Director of Course for Auxiliary Nurses.

PAHO (Pan American Health Organization)

Dr. Germán Perdomo Córdoba, Representative; Dr. Daniel Gutierrez, Consultant. Edificio Foncomin, 3rd floor, 20 de Octubre 1903, Sopocachi, La Paz. Tel: 371644.

PROCOSI (Programa de Coordinación en Supervivencia Infantil)

Lic. Susana Barrera, Director of the Communication and Education Unit and Dr. Ana María Aguilar Liendo, Chief of the Health Unit, Lisímaco Gutierrez (Pasaje 490, No 4), Sopocachi, La Paz. Tel: 342509.

Radio Color F.M. 101, Sistema Radiofónico San Gabriel

Lic. Lucía Sauma Patiño, Director, General Lanza 2001, Casilla 4792, La Paz. Tel: 368121.

SAVE THE CHILDREN

Dr. Lila Céspedes Claire, Advisor. MotherCare, Pedro Salazar 517, La Paz. Tel: 325011; Fax: 391455.

UNICEF

Dr. Guido Cornale, Health Officer, and Lic. Magaly de Yale, Nutrition Officer, Plaza 16 de Julio No. 280, Obrajes, La Paz. Tel: 786577; Fax: 786327.

UMSA (Universidad Mayor de San Andrés), Faculty of Medicine

Dr. Oscar Sandoval Morón, Chief of Pediatrics, Av. Saavedra. Tel 375385-390222.

USAID/Bolivia

Mr. Charles Llewellyn, Public Health Advisor, and Dra. Elba Mercado, Project Coordinator, Edificio Banco Industrial, 6th floor, Av. 16 de julio, Sopocachi, La Paz. Tel: 320262; Fax: 391552.

Cochabamba

Hospital, Caja Nacional de Salud

Dr. Edmundo Sánchez, Pediatric Surgeon; Dr. Magaly Zubieta, Pediatrician.

Hospital Caja Petrolera de Salud

Dr. Roberto Ewell, Director.

Hospital Albina Patiño (Fundación Simon I. Patiño)

Dr. Pierre Leonard, Director; Dr. Max Sánchez, Chief of Training; Dr. Mario Bustos, Pediatrician.

Maternidad Germán Urquidi (MPSSP)

Dr. Alfredo López Siles, Chief of Pediatric Service; Drs. Nelson Vega, Rubén Arandia and Gonzalo Moscoso, Pediatricians. Av. Aniceto Arce, Cochabamba. Tel: (042)-28109.

Santa Cruz

Centro de Salud Villa Santa Rosita (MPSSP)

Dr. José Roca, Director; María Terrazas, Auxiliary Nurse.

Maternidad Percy Boland (MPSSP)

Enf. Isabel Mejía de Yabeta, Supervisor.

PROSALUD

Lic. Martha Mérida, Director of Training, Av. Isabel la Católica 810, Santa Cruz. Tel: 349477; Fax: 336823.

Centro de Salud Villa el Carmen (PROSALUD)

Dr. Oscar Quiroga, Director; Dr. Walter Pacheco, Gynecologist; Ibis Chumacero, Auxiliary Nurse.

Centro de Salud La Cuchilla (PROSALUD)

Dr. Jorge Escalante, Director; Dr. Freddy Filipovic, Gynecologist; Lic. Mercedes Avalos, Nurse; Telma Claudio, Auxiliary Nurse.

ANNEX 2

Ten Steps to Successful Breastfeeding

1. Have a written breastfeeding policy
2. Train health care staff in necessary skills
3. Inform all pregnant women
4. Initiate breastfeeding within a half-hour
5. Show mothers how to breastfeed
6. Give newborn infants no other food or drink
7. Practice rooming-in
8. Encourage breastfeeding on demand
9. No artificial teats or pacifiers
10. Refer mothers to breastfeeding support groups

Source: Joint WHO/UNICEF Statement, "Protecting, Promoting and Supporting Breastfeeding: The Special Role of Maternity Services", 1989

ANNEX 3

RESUMEN DE ACTIVIDADES DE COTALMA

COTALMA: Comité Técnico de Apoyo Técnico a la Lactancia Materna
Fué creado en 1989, por 16 profesionales graduados de
Wellstart - San Diego, California EEUU.

En 1989 realizó las siguientes actividades:

- Participación en el Comité Nacional de Lactancia Materna del Ministerio de Previsión Social y Salud Pública
- Elaboración de normas de lactancia materna hospitalarias, distribuidas a hospitales a través de la Dirección Nacional de Salud Materno Infantil del Ministerio de Salud.
- Participación en los Cursos de Atención Integral a Menores de cinco años en coordinación con el Ministerio de Previsión Social y Salud Pública
- Participación en cuatro Cursos de Formación de Auxiliares de Enfermería de la Escuela Nacional de Salud Pública y de la Escuela María Inmaculada del Hospital Juan XXIII
- Organización y ejecución de cursos sobre Lactancia Materna para:
 - personal de diferentes niveles del Hospital del Niño
 - personal de Enfermería del Hospital San Gabriel y Seguro Universitario
 - Enfermeras Profesionales del Centro de Salud La Paz
 - Personal de Enfermería del Hospital Metodista y Clínica Modelo (Caja Bancaria Estatal de Salud)

En 1990 realizó las siguientes actividades en orden secuencial:

Enero: Curso sobre Lactancia Materna en la ciudad de Santa Cruz, organizado por la Sociedad de Pediatría para médicos, enfermeras, y auxiliares de enfermería (75 participantes).

Febrero: Elaboración de material educativo para área rural en la ciudad de Entre. Dra. C. Casanova.

- Abril: Curso en la ciudad de Santa Cruz organizado por Prosalud para 70 profesionales, en el cual se aplicó un pre- y post-test de conocimientos cuyo resultado es el siguiente:
 Pretest - 14% respuestas correctas
 Post-test - 70% respuestas correctas
- Mayo: Curso para 22 medicos residentes de pediatria y 4 medicos residentes de Ginecologia-Obstetricia del Ministerio de Previsión Social y Salud Pública y de la Caja Nacional de Salud.
- Junio: Evaluación rápida en el distrito de Samaipata del departamento de Santa Cruz con CCH y USAID. Lic. G. Peñaranda.
- Julio: Participación. Jornadas Medicas en el Hospital san Gabriel.
- Agosto: Participacion Curso Pediatria en el Hospital Albina Patiño, Cochabamba
- Octubre: Seminario Taller para 70 Docentes de las Facultades de Medicina, Carrera de Enfermeria y de Nutricion. La Paz, Sucre y Cochabamba
- Octubre: Curso de Capacitación destinado a personal en nivel operativo de las ciudades de Cochabamba, Santa Cruz, Sucre, Oruro y La Paz (30 Participantes)
- Octubre: Jornadas Pediátricas en la ciudad de Oruro y Curso de Post-grado sobre Lactancia Materna con participación de Dra. Audrey Neylor y Lic. Elizabeth Creer

En el curso del presente año (1991) y hasta la fecha:

- Enero: Réplica del curso de Capacitación (de Octubre 1990) en la ciudad de Santa Cruz para personal de la Maternidad Percy Boland, Hospital Petrolero, Hospital Japonés, Hospital de la Caja Nacional de Salud. (Coordinadora, Dra. Dolly Montaña).
- Febrero: Elaboración de un proyecto de programa de capacitación en lactancia materna para personal de salud.
- Julio: Encuesta sobre practicas Hospitalarias, Dr. Bartos con apoyo de UNICEF.
- Julio: Participacion Curso de Lactancia Materna para Enfermeras Profesionales, organizado por el Colegio Departamental de Enfermeras, La Paz

Agosto: Participación en el Diagnóstico de la Situación Actual de la Lactancia Materna en Bolivia. USAID, OMS y OPS. MotherCare, Dr. Bartos, Lic. Peñaranda.

ANNEX 4

**UNHCR POLICY FOR ACCEPTANCE, DISTRIBUTION AND USE
OF MILK PRODUCTS IN REFUGEE FEEDING PROGRAMMES**

* ENDORSED (as of 8/1/89) by WHO, UNICEF
(Janet Nelson sent) <WFP.

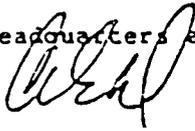
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UNHCR/IOM/88/89
UNHCR/FOM/76/89

OFFICE OF THE UNITED NATIONS HIGH COMMISSIONER FOR REFUGEES

GENEVA

Inter-Office Memorandum No. 88/89
Field Office Memorandum No. 76/89

To: All UNHCR Staff Members at Headquarters and in the Field
From: The Deputy High Commissioner 
Ref: 593

Date: 25 July 1989

Subject: Policy for Acceptance, Distribution and Use of Milk Products
in Refugee Feeding Programmes

1. The attached policy document outlines instructions for the control of the use of milk products in refugee settings. You are hereby requested to undertake an evaluation of the assistance programme for refugees in your country and promote appropriate changes so as to secure the safe use of milk products in all programmes supported and co-ordinated by UNHCR.

2. These instructions have been endorsed by the Nutrition and Food Aid Units of the World Health Organization and by UNICEF. The World Food Programme has concurred with their application. They are to be implemented forthwith.

3. This policy stems from concern regarding the increased use of dried milk powder (particularly donated DSM) in refugee settings. DSM has been found to increase the risk of illness in young children who live in an unsanitary surrounding. Furthermore it discourages breast-feeding by promoting the alternative use of infant feeding bottles with serious implications for the health for young children.

4. Our current analysis points toward fourteen countries where DSM or milk formula are at present distributed in either general rations or to general groups: Algeria, Angola, Costa Rica, Djibouti, Ethiopia, Honduras, Hong Kong, Iran, Malaysia, Pakistan (Afghan repatriation) Somalia, Sudan, Swaziland and Vietnam. The composition of food rations in these, and any other countries distributing milk powder in the general rations will need to be reviewed and nutritionally comparable substitute items will have to be found.

5. A formal evaluation of achievement will be carried out in the first quarter of 1990.

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Issues related to the safe use of milk products in
feeding programmes in refugee settings

1. Introduction

Milk products, particularly dried skim milk (DSM), have become a commonly donated food item in relief operations. Because of documented evidence of the health risks associated with the indiscriminate distribution and use of milk products in feeding programmes in refugee settings, a decision has been taken to introduce a policy in their regard (see para 6.1. - 6.6. for specific guidelines).

2. Definition

For the purpose of this policy, the term "milk product" means any non-fresh milk product such as powdered, evaporated, condensed, or otherwise modified milk, including infant formula.

3. Nutritional value of milk

- 3.1. In general, milk is an excellent source of essential amino acids (proteins), calcium, vitamins B, and a number of trace elements. It is a limited source of iron - in fact, it inhibits the absorption of iron from other foods - and provides almost no vitamin C. Unless fortified, it is devoid of vitamin A when in skimmed form.
- 3.2. Breast-feeding is an unequalled way of providing complete hygienic food for the healthy growth and development of infants, and forms a unique biological and emotional basis for the health of both mother and child. In addition, the anti-infective properties of breast milk help to protect infants against disease, and there is an important relationship between breast-feeding and child spacing.
- 3.3. Breast milk alone satisfies the nutritional requirements of the normal infant for at least the first four months of life, and frequently up to six months. After this time, other foods become necessary to complement breast milk in order to meet the energy and other nutrient requirements of the infant. Ideally, as is still the case in many traditional cultures, breast-feeding will also continue well into the second year of life.
- 3.4. On a per kilogram basis, the energy and protein requirements of young children are considerably greater than those of the adult. There are also important qualitative differences in energy and nutrient requirements that are related either to the nutritional needs of children or to their particular physiological characteristics. Milk products such as DSM can help to meet these requirements if used safely. In feeding programmes in refugee settings, the safest use of dried milk products is as a mix with cereal flours.
- 3.5. Milk is rarely a part of the adult diet of refugee populations, except among pastoral nomads who depend on livestock to meet their nutritional needs. Dietary transition is a necessary adaptation process for such nomadic groups in refugee settings, and dried skim milk cannot be considered to be on a nutritional par with the fresh animal milk that is a traditional component of this group's dietary intake.

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4. Summary of the health hazards associated with the use of dry milk products in refugee settings

Problems with contamination

- 4.1. Water supplies are commonly inadequate, both qualitatively and quantitatively in refugee relief settings. Insufficient water means that containers and utensils used for mixing milk are often dirty, thus making secondary contamination highly probable. Milk powder that is reconstituted with contaminated water, is an ideal medium for breeding harmful bacteria.
- 4.2. The immune system of a child below two years of age is not yet fully developed and consequently resists less well than the adult the effects of high bacterial food contamination. Acute diarrhoea and dehydration are the inevitable results of ingesting contaminated milk, and both of these conditions contribute to malnutrition.

Problems with reconstitution

- 4.3. Feeding children over-diluted milk powder as their main source of food will inevitably result in inadequate dietary intake and contribute to malnutrition. On the other hand, children who are fed under-diluted milk powder can become seriously ill due to dangerously high concentrations of sodium and protein; renal failure and death can result.
- 4.4. Different brands and types of milk powder carry different mixing instructions, which are rarely included on packaging in a language that is appropriate to refugee settings. Likewise, the possibility of proper instruction in, and monitoring of, reconstitution practices is extremely limited under these circumstances, especially during an emergency phase. Such activities only use up the valuable time of health workers who need to focus on more pressing health education issues.

Lactose intolerance

- 4.5. Until fully weaned, children secrete the digestive enzyme lactase, which is required to metabolize lactose in breast milk. Once breast-feeding is stopped, however, the enzyme ceases to be produced in many individuals in populations that are unaccustomed to drinking milk. If milk is given to persons who do not secrete lactase, diarrhoea can result.

Infant feeding

- 4.6. The hazards associated with using milk products for infant feeding are well documented. UNHCR supports the policy of the World Health Organization concerning safe and appropriate infant and young child feeding, in particular by protecting and promoting breast-feeding and encouraging the timely and correct use of complementary foods. The use of milk products in refugee settings must be in conformity with this policy.

4.7. It is reasonable to assume that the normal hazards associated with the use of breast-milk substitutes are considerably magnified in refugee settings. It is difficult to prevent the use of milk powder as a substitute for breast milk when it is distributed in a dry unmixed form as a part of general rations or in feeding programmes.

5. Studies of DSM use in refugee settings

5.1. Only two objective epidemiological studies have been undertaken to date regarding the effects of DSM use in refugee settings. The first, done by Bennet et al. ^{1/} in 1961 in Uganda, found twice as much moderate malnutrition among two-year-old children where DSM was provided than in a similar camp where fresh cow's milk was available and no DSM distributed. Among three-year-olds, 10% were undernourished in the DSM-distribution camp compared with virtually no malnutrition found in this age group in the other.

5.2. A recent DSM Safety and Distribution Study in Pakistan ^{2/} tested numerous samples of reconstituted milk and found that 75% had high aerobic plate-counts indicating dangerous levels of pathogenic bacteria. Secondary contamination from container handling was widely evident even after the water used in reconstitution had been boiled.

5.3. In addition, approximately 36% of respondents in this survey said they would use DSM for feeding breast-fed children, while some 60% said they would feed DSM to children under five years of age. Of the 114 respondents who were using DSM as a breast-milk substitute, 48% used a bottle ant teat.

5.4. More substantive and illustrative data are required regarding the effects of the distribution of dried milk in both relief and development settings. All of the information that is available to date, however, clearly points to a need for systematic regulation and restriction of this commodity's distribution and use.

6. Guidelines for the safe use of milk products

6.1. Milk powder, both dried skim milk (DSM) and dried whole milk (DWM), may be used in reconstituted form only where it can be mixed carefully and hygienically in a supervised environment for on-the-spot consumption. On-the-spot feeding programmes should be conducted in enclosed areas where beneficiaries can be supervised and where the carrying away of reconstituted milk can be prevented.

6.2. In the above setting, DSM should always be mixed with oil in order to supply sufficient energy. Both DSM and DWM should be prepared with sugar to increase their energy content and improve palatability.

^{1/} Bennet, F.J., et al. Refugees from Rwanda in Uganda (1961)

^{2/} DSM Safety and Distribution Study, Pakistan. World Food Programme. Pilgrim Associates (1987).

- 6.3. In most situations, DSM or DWM may be distributed in dry take-away form only if they have been previously mixed with cereal flours. Fortified bread, tortillas, porridge and the like made with milk are nutritionally valuable foods. Once milk powder has become part of a baked or fried food that remains dry, the risk of contamination on its account is negligible. The addition of milk powder in baked goods will also help to maintain their freshness. The possible misuse of milk powder for infant feeding is prevented if it is mixed with flour at a central point prior to its being distributed to beneficiaries.
- 6.4. The only possible exception to this will be distributions to groups who have traditionally used milk as a central component to their diet (eg. nomadic populations). In such cases, proper usage must be monitored and if there is any indication of its use as a breast milk substitute, (eg. infant feeding bottles), distribution of milk powder should be discontinued.
- 6.5. Infant-formula distribution should be discouraged in refugee relief settings, even in cases of difficult lactation. Relactation should be attempted by caring for and encouraging the biological mother. Failing this, wet-nursing should be considered as a first feeding alternative, and even supported with payment in kind if necessary.
- 6.6. When breast milk is not available, a suitable breast-milk substitute must be provided, together with clear instructions to those who need to use it, on proper hygienic mixing and use for feeding with a cup and a spoon. Infant-feeding bottles and teats should not be used under any circumstances. No infant formula should be given to children who are six months of age or older. Rather, instructions on appropriate weaning practices for this age group should be provided.

POLICY OF THE UNHCR RELATED TO THE ACCEPTANCE, DISTRIBUTION AND USE
OF MILK PRODUCTS ^{1/} IN FEEDING PROGRAMMES IN REFUGEE SETTINGS

1. UNHCR will accept, supply and distribute donations of milk products only if they can be used under strict control and in hygienic conditions, eg. in a supervised environment for on-the-spot consumption.
2. UNHCR will accept, supply and distribute milk products only when received in a dry form. UNHCR will not accept liquid or semi-liquid products including evaporated or condensed milk.
3. UNHCR will accept, supply and distribute dried skim milk (DSM) only if it has been fortified with vitamin A.
4. UNHCR supports the principle that in general ration programmes protein sources such as pulses, meat or fish are preferred to dried skim milk. UNHCR notes that DSM pre-mixed centrally with cereal flour and sugar is useful for feeding young children especially if prepared with oil.
5. UNHCR will advocate the distribution of dried milk in a take-away form, only if it has been previously mixed with a suitable cereal flour, and only when culturally acceptable. The sole exception to this may be where milk forms an essential part of the traditional diet (eg. nomadic populations) and can be used safely.
6. UNHCR will support the policy of the World Health Organization concerning safe and appropriate infant and young child feeding, in particular by protecting, promoting and supporting breast-feeding and encouraging the timely and correct use of complementary foods in refugee settings.
7. UNHCR will discourage the distribution and use of breast-milk substitutes in refugee settings. When such substitutes are absolutely necessary, they will be provided together with clear instructions for safe mixing, and for feeding with a cup and a spoon.
8. UNHCR will take all possible steps to actively discourage the distribution and use of infant-feeding bottles and artificial teats in refugee settings.
9. UNHCR will advocate that when donations of DSM are supplied to refugee programmes, the specific donors will be approached for cash contributions to be specially earmarked for operational costs of projects to ensure the safe use of this commodity.

^{1/} Any non-fresh milk product such as powdered, evaporated, condensed, or otherwise modified milk including infant formula.

BREASTFEEDING PROMOTION AND PROTECTION PROGRAM**BOLIVIA****I INTRODUCTION**

The advantages of breastfeeding over artificial feeding are well known. They include reduced infant mortality and morbidity, improved infant nutrition, birth spacing, uterine involution, reduced post-partum bleeding, psychological advantages for mother and baby and economic advantages.

There is, however, a trend of decline in both prevalence and duration of breastfeeding throughout the world. Bolivia is no exception. This trend is more apparent in urban areas, due to the inclusion of mothers in the working force, the influence exerted by the most affluent urban mothers as role models, promotion of breast milk substitutes, and inadequate attention to breastfeeding and lactation management by health personnel. A survey done by the Bolivian Pediatric Society, presented at the October 1990 National Meeting, showed that due to poor knowledge of mothers, weaning was started before 4 months in more than 50% of cases and that the average duration of breastfeeding was less than 11 months. There was a negative association between duration of breastfeeding and prenatal care, hospital deliveries and cesarean sections, suggesting that mothers with greater contact with health institutions are more likely to breastfeed for shorter periods of time.

The urban population in Bolivia comprises more than 50% of the total, and its rate of growth is greater than that of the rural population. If no action is taken at the present time, there will be a marked reduction in the practice of breastfeeding that will negatively affect the efforts to reduce the high infant mortality rates, as well as infant nutritional status.

Several international agencies and governments have recently recognized the need to promote and protect breastfeeding. The World Summit on children held in New York (September 30, 1990), and the Innocenti Declaration (Florence, Italy, Aug 1, 1990) are examples of that recognized need.

In 1989, an organization for the promotion of breastfeeding was constituted in La Paz, Bolivia, under the name of "Comité Técnico de Apoyo a la Lactancia Materna" (COTALMA) by 16 health professionals from La Paz that had attended a lactation management course at Wellstart, in San Diego, California, USA. The organization has focused primarily on education of health professionals to bring about changes in attitudes and practices related to human lactation, and has participated as a recognized institution in the National Breastfeeding Committee (Maternal and Child Health Division, Ministry of Health). Over a period of two years, COTALMA has organized more than 12 courses, seminars and workshops, primarily in La Paz, but also in Santa Cruz, Oruro and Cochabamba, reaching over 200 health professionals. In October 1990 a one week course was organized for health professionals from four cities in addition to La Paz (Santa Cruz, Cochabamba, Oruro and Sucre) in order to motivate the creation of regional groups that will in turn be active in breast protection and promotion activities. Simultaneously, a seminar for university professors at the three universities where health sciences are taught, and for professors involved in post-graduate training, was held. There is a strong commitment to modify the curricula at these universities in order to include basic and scientific concepts of lactation. These activities were funded by USAID and UNICEF; Audrey Naylor, MD, DrPH and Elizabeth Creer FNP, MPH, from Wellstart were faculty, along with members of COTALMA. A course in human lactation was held as part of the National Pediatric meeting (Jornadas Nacionales de Pediatría) with Dr. Naylor as guest speaker. In January 1991, a three day course on human lactation was organized by the team from Santa Cruz that attended the one week course held in October 1990 in La Paz, for approximately 50 health professionals from different institutions. As part of the course, field visits to the major maternity hospitals were performed, including lectures and informal discussions with personnel involved in perinatal care.

COTALMA has developed a Lactation Clinic within the Pediatric Hospital in La Paz, which along with the library and slide collection, constitute a resource center in Bolivia for lactation management training.

In January 1991 COTALMA received a formal request to write the section on national breastfeeding guidelines of the revised (second) edition of the National Health Plan (Plan de Salud Nacional) of the MOH.

The activities developed so far by COTALMA have encountered two main obstacles: 1) members of the group have other responsibilities and can work on lactation promotion and training in limited periods of time and 2) there are no regular funds available to develop activities.

The following proposal focuses on breastfeeding management training through the establishment of a National Lactation Training Center. It also takes into account issues such as social marketing and clinical research in aspects related to breastfeeding. Supervision, monitoring and evaluation constitute another important area of the program.

II PROGRAM GOAL AND OBJECTIVES

PROGRAM GOAL

Promote and protect breastfeeding particularly in urban and periurban areas, in order to both improve infant nutrition and contribute to an overall reduction in infant morbidity and mortality rates.

GENERAL OBJECTIVES:

1. At the end of the program period (5 years), the National Lactation Training Center will have provided Training in Lactation Management to 150 health professionals (trainers). It is expected that these professionals will in turn provide courses and training to 2500 health professionals, in different areas of the country.
2. The program will contribute to achieve significant changes in selected health centers' routines through the teams trained at the National Training Center. It is expected that 80% of participating hospitals will apply at least 50% of the "ten steps"¹ in their maternity services.
3. At the end of the program, the number of mothers from participating Hospitals fully² breastfeeding at the time of discharge will increase by 50% in relation to the present number as determined by a base line study.
4. The program will contribute to the integration of breastfeeding in the curricula of health sciences schools throughout the country.

SPECIFIC OBJECTIVES

1. Establish within 6 months of the beginning of the program a National Lactation Training Center.
2. Provide ten two-week courses for 15 participants from hospitals from different regions of the country, two courses per year.
3. Provide a workshop for University professors, and develop strategies for an effective integration of breastfeeding in the curricula of health sciences schools.
4. Develop a social marketing strategy for promotion and protection of breastfeeding in health services where there is prenatal care as well as labor and delivery.
6. Promote clinical research on breastfeeding practices in Bolivia.

¹ Protecting, promoting and supporting breast-feeding: The special role of maternity services. A joint WHO/UNICEF Statement. WHO Geneva, 1989. (See annex)

² Full breastfeeding includes exclusive and almost exclusive breastfeeding; exclusive means "no other liquid or solid is given to the infant"; almost exclusive means "vitamins or juice given no more than once or twice per day, not more than 1-2 swallows".

From: Institute Issues Report #4. Report of a Meeting on Breastfeeding Definitions Held by the Interagency Group for Action on Breastfeeding, Hosted by UNICEF, April 28, 1989.