



INSTITUTE FOR REPRODUCTIVE HEALTH

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- Natural Family Planning
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**Lactation Education for Health Professionals:
Lessons Learned from the Testing of the
Breastfeeding Module**

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ACRONYMS

BFHI	Baby Friendly Hospital Initiative
IBFAN	International Baby Food Action Network
IGAB	Interagency Group for Action on Breastfeeding
LAM	Lactational Amenorrhea Method
MCH	Maternal and Child Health
MOH	Ministry of Health
NGO	Non-government organizations
PAHO	Pan American Health Organization
SIDA	Swedish International Development Authority
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WHO	World Health Organization

FOREWORD

This publication presents the results of the education research project "Lactation Education for Health Professionals," which began in March 1989 with the purpose of developing and testing a breastfeeding education module for use in health professional schools

This project has been unique for several reasons: 1) it is among the first in the maternal and child health (MCH) field to develop and test curricula, 2) it focuses on the basic training rather than in-service education of health professionals, and 3) the breastfeeding curriculum emerged through a team process that included faculty and service providers from all the countries participating in the project

The commitment and efforts of health professionals in Chile, Colombia, Costa Rica, Ecuador, Honduras and Peru, made possible the testing of the breastfeeding curriculum and the achievement of many other activities that developed out of this exercise

The general findings of this project are combined in Section IV, Lessons Learned. Selected country-specific experiences are included as case studies. The case studies include a profile of the testing site and address the procedural and substantive issues, and the unexpected results of specific testing experiences in Chile, Colombia and Peru. We believe that this approach will provide information on the results of the testing of the breastfeeding module while better reflecting the commitment of individuals involved in these experiences.

The lessons learned are discussed within their proper context and are divided into two main areas: those related to content or technical breastfeeding issues, and those related to process or curriculum change issues.

Our objective is to report the results of the testing of the breastfeeding module in health professional schools and present them in a manner that will facilitate putting the lessons learned into practice.

I INTRODUCTION

Breastfeeding is an unequalled method of providing complete food for the health, growth, and development of infants, and it forms a unique biological and emotional basis for the health of both the mother and the child. The nutritional, immunological, and health benefits for the child are widely recognized. Breastfeeding has important health benefits for the mother as well. In the immediate postpartum it assists in uterine involution. Recent research has shown that breastfeeding may also decrease a woman's likelihood of developing breast and other cancers. Possibly the most important health benefit, for both mother and child, is its relationship to child spacing. In many countries, it is the major factor determining the interval between births (Mata, 1984, Jelliffe, 1988, Labbok and Koniz-Booher, 1989, Rodriguez-Garcia and Schaefer, 1990)

Nevertheless, the prevalence and duration of breastfeeding have declined in many parts of the world for a variety of social, economic, and cultural reasons, such as population shift from rural to urban areas and mothers' entrance into the workforce. Modern technologies and changing lifestyles have reduced the importance traditionally given to breastfeeding in many societies. In the early 1900s, infants were breastfed during their first year. This trend continued in developing countries for several additional decades. However, by the year 2000, it is anticipated that less than ten percent of infants will be fully breastfed until the age of four months (U S National Committee for World Food Day)

In many countries it is not only the decline in breastfeeding that is alarming but the speed at which it is taking place. This is powerfully demonstrated by the figures in the following statement

"It's hard to believe the speed at which the breastfeeding habit collapsed around the world. In Chile, in 1960, according to a World Bank study, 95% of mothers were still breastfeeding at the end of one year. By 1969, only 6% were, and only 20% of the babies were primarily breastfed after two months. In Singapore, 80% of babies were primarily on breastmilk at three months in 1951, by 1971, the figure had fallen to under 5%. Over 95% of Mexican mothers were breastfeeding at six months in 1960, a decade later the figure had fallen to 40%. Similar statistics could be given for countries in every region." (U S National Committee for World Food Day, 1992, p 14)

Health services themselves, however unwittingly, have frequently contributed to the decline, whether by failing to support and encourage mothers to breastfeed or by introducing routines and procedures that interfere with the normal initiation and establishment of breastfeeding. Often this is due to a combination of factors. Hospital nursery policies and routines such as separating mothers from their infants at birth, giving infants glucose water, tea, or milk substitutes by bottle, and adherence to strict feeding schedules frequently are not conducive to the establishment of breastfeeding.

Lack of support for breastfeeding by health professionals also has considerable influence. Infant formula manufacturers, by directing their advertising toward physicians, have convinced many of them of the superiority of breastmilk substitutes. This belief is reinforced by the provision of free formula samples, which are passed from physician to new mothers as an inadvertent inducement to bottlefeed. Finally, there is the health personnel's insufficient knowledge about optimal breastfeeding practices and lack of experience in providing breastfeeding mothers with effective support. Generally, their basic training does not prepare health professionals to provide mothers with the active support during

pregnancy and following birth that they need for breastfeeding to be successful. Lately, however, proponents of comprehensive women health services have begun to include breastfeeding in their recommendations for the training of health professionals (Rodriguez-Garcia, 1991). A study conducted in New York (Winikoff et al, 1986) indicated that the predominant assumption conveyed to mothers by health professionals was that bottlefeeding was expected. In a follow-up study, breastfeeding education was provided to nurses and other health professionals. As a result, changes were made in hospital routines and an increase in the incidence and exclusivity of breastfeeding followed (Winikoff et al, 1987).

The Lactation Education for Health Professionals project has been an attempt to fill this gap and to develop a breastfeeding module that can be used in different courses in the basic curricula of health professionals or that can be used as is for postgraduate or in-service training. The intent is to provide medical, nursing, nutrition, and other students with accurate and up-to-date information on breastfeeding in order for students to develop positive attitudes toward and basic skills in breastfeeding.

While there are a number of groups in the U.S. and abroad that have developed breastfeeding curricula, these curricula, for the most part, are oriented toward in-service training and represent the views of one specific person or group. Furthermore, these curricula are not readily available and, in fact, some groups are not willing to share their curriculum with others. The Lactation Education for Health Professionals breastfeeding module reflects the experiences of a multicountry team of health educators and aims at providing the views, not of a single institution but of a multidisciplinary team of Latin American MCH specialists and international experts.

II LACTATION EDUCATION FOR HEALTH PROFESSIONALS

The project was conceptualized as a three-tier strategy to develop a breastfeeding module for health professional schools and to affect lactation education in the Americas by enabling new graduates from nursing and other health professional schools to develop positive attitudes toward breastfeeding and provide breastfeeding education and services¹

Establishing Linkages for Program Development

In the course of developing the project (1988), the investigators established and/or renewed contact with colleagues in Colombia, Chile, Mexico, and Venezuela as well as within the United States Agency for International Development (USAID), the Pan American Health Organization (PAHO), Wellstart, and others, and conducted a limited survey. It was found that although several field projects existed in Chile, Costa Rica, Honduras, and Mexico, breastfeeding was just beginning to receive attention by health planners and educators in most of the other countries in the region. Furthermore, the survey revealed that nursing and medical school curricula did not, for the most part, include breastfeeding components. Looking at existing breastfeeding or lactation education programs, several important findings were identified:

- Quality breastfeeding training programs (i.e., Wellstart, San Diego, La Leche League, University of California at Los Angeles) did not make their curricula available
- When available, breastfeeding training curricula in many countries were not complete or up-to-date or were population-specific and very locally oriented
- Some breastfeeding curricula outlines described in the literature did not appear to have been empirically tested or applied
- No curricula existed for the formal or basic education of nurses, physicians, or other health professionals

From these findings and communications emerged the need for the development of a breastfeeding curriculum to be integrated into health professional schools in the Americas, especially nursing schools. The investigators selected nursing students as the target audience because of the key role nurses play in health promotion and protection and because nurses often provide the first contact between the population and the health service delivery system. Furthermore, nursing students were perceived as being at about the middle in the health worker educational continuum. Thus a module targeted to them easily could be simplified for lower levels of health workers or expanded in depth and coverage for higher levels of health professionals. The investigators then proposed the development of a lactation education module designed to provide guidance to the faculty regarding the teaching methodology, resources required, and evaluation criteria most appropriate for each topic of the suggested essential core

¹ The principal investigator of this project was Rosalia Rodriguez-Garcia, the then Director of Education and Communication of the Georgetown University Institute for Reproductive Health. The project was also directed by Lois A. Schaefer, the then Education and Communication Associate

areas. The primary purpose of the module would be to ensure that breastfeeding training given to not only nurses, but also physicians, nutritionists, and other health professionals is clear, consistent, correct, and up-to-date. Although the module would be self-contained, parts or all of it could be integrated into, or be used as a complement to, existing curricula.

Phases of the Project

The project was developed in three phases. During Phase I, the investigators invited health care professionals from Latin America with experience and interest in breastfeeding to participate in a one-week regional seminar at Georgetown University in June 1989. Twenty-five health care professionals from eleven Latin American countries and the United States participated in the seminar. The countries represented were Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, Guatemala, Honduras, Mexico, and Peru. About half of the seminar participants were nursing faculty with breastfeeding and/or curriculum development experience. The other half of the group consisted of service personnel, physicians, and educators involved in practical, hands-on breastfeeding activities. All participants were decision makers at different levels in the health care delivery and professional education systems.

As a result of the seminar and the work of this team of professionals (see Appendix 1), the skeleton of a breastfeeding education module emerged which included objectives, content outline, evaluation criteria, and resources needed. In addition, during the seminar participants developed a spirit of collaboration and cooperation that has enhanced the work required to implement this project. Most importantly, it has resulted in the creation of an informal network for breastfeeding education.

Following the seminar, a group of international experts conducted a technical review of the module. The technical reviewers (see Appendix 2) were chosen for their expertise in educational methodology, breastfeeding research, the provision of breastfeeding services, and/or management. The group of reviewers included expert educators, lactation consultants, nurses, nutritionists, and physicians from around the world, including parts of Africa, Asia, and Europe. In addition to recommending specific changes in the module, the reviewers encouraged the investigators to make the curriculum available to as large an audience as possible. Many of the reviewers also expressed an interest in pilot testing the lactation module in their own schools.

The result of Phase I of this project was the completion of a breastfeeding education module to be used in health professional schools. This core breastfeeding module has fifteen units (see Table 1). One unit, Unit VIII on the Lactational Amenorrhea Method (Labbok et al, 1990), was chosen to be fully developed as a sample teaching unit, thereby providing an example of how the core curriculum could be used to develop specific teaching plans. This unit was deemed important for other reasons as well.

First, breastfeeding is of vital importance to family planning because it delays ovulation. Initial research demonstrated that exclusive breastfeeding during the first six months postpartum in an amenorrheic mother can provide more than ninety-eight percent protection against an unplanned pregnancy (Kennedy et al, 1989, Labbok and Koniz-Booher, 1989). These three elements constitute what it is now referred to as the Lactational Amenorrhea Method (LAM) (Labbok and Krasovec, 1989). A more recent prospective study conducted in Chile shows that LAM can be a successful family planning method with an efficacy rate as high as 99.5 percent (Perez et al, 1992).

Second, the teaching unit on LAM is the first available on this method of child spacing. It reflects the investigators' belief in the vital importance of breastfeeding for both child survival and child spacing. Third, the inclusion of LAM in the breastfeeding module reflects the U.S. Agency for International Development's (USAID) recognition of the fertility reduction benefits of this family planning method for postpartum women and USAID's commitment to further research and education on and promotion of the use of LAM (Gillespie, 1992).

Finally, the study and promotion of LAM is the core mandate of the Institute for Reproductive Health. Thus, the project presented here contributes to the Institute's mandate related to breastfeeding.

Table 1 Breastfeeding Module Content Outline

1	History of Breastfeeding Practices
2	Sociocultural, Technological, and Political Factors that Influence Breastfeeding Practices
3	Current Status of Maternal and Child Health (MCH) in the Country and Risk Factors for MCH
4	Biological and Psychosocial Aspects of Breastfeeding
5	Anatomy of the Breast and the Physiology of Lactation
6	Nutrition of the Mother and Child during Lactation
7	Lactation and Sexuality
8	Lactation and Birth Spacing: the Lactational Amenorrhea Method (LAM) and Other Methods
9	Clinical Skills for the Initiation and Management of Lactation
10	Lactation Management: Mothers Who Work Outside the Home and Other Special Circumstances
11	Communication and Teaching Skills for Health and Other Professionals
12	Communication and Counseling Techniques for Breastfeeding Education at the Family Level
13	Interventions to Effect Change in Health Care Service Delivery Systems
14	Breastfeeding Promotion at the Community and Societal Levels
15	Evaluation of Breastfeeding Promotion Activities

Source: Rodriguez Garcia, R., Schaefer, L., & Yunes, J. (Eds.) (1990). Lactation education for health professionals. Washington, DC: Pan American Health Organization/WHO, p. 17.

Phase II included two main activities: testing the curriculum and preparation of case study reports of the testing process and its results. The breastfeeding module testing process was initiated in the basic nursing curricula in ten sites in seven countries: Chile (1), Colombia (2), Costa Rica (1), Ecuador (1), Honduras (1), Mexico (1), and Peru (3). In Peru and Honduras the module was examined for possible use by both nurses and physicians.

The testing phase included the following steps:

- review of the module and the content and methodology therein,
- selection of units to be tested, if not the entire module,
- identification of key individuals and authorities whose support and approval were deemed essential, and
- development of a plan of action.

This plan of action included the identification of experts who could teach the different units of the module, the materials needed for each unit, and the evaluation of students' learning. The evaluation of students' learning and attitudes could be conducted through pre- and posttests, observation of their performance in the clinic or in the community, and by asking non-probing questions to the mothers who have received breastfeeding information from those students.

To monitor the testing process, a form was developed that provided guidelines for recording the academic, technical, and administrative factors that affected -- as barriers or as facilitators -- the implementation of the model. A copy of the guidelines for data collection is presented in Appendix 3. Five of the sites have written a case study report on the lessons learned from using the breastfeeding module curriculum either in its entirety or in part. These case studies are presented in Section IV of this document, along with a more detailed description of the case study methodology. The case study report outline can be found in Appendix 4.

The activities of Phase I and Phase II, which included on-site and on-line (phone, fax, mail) technical consultation, were geared toward ensuring the quality of breastfeeding teaching and the self-sufficiency of this effort. Also for quality control purposes, linkages were established by each site with perinatal, maternity, family planning, and other services so that students and faculty efforts to promote breastfeeding would not be limited to university-based activities.

Phase III of this project focused on analysis of the data collected during the testing of the module. The goal of the research was to examine the process of curriculum implementation through site-specific case studies, each of which would be presented and discussed in national and regional meetings. This process has resulted in the publication of this document, which synthesizes the results of the case studies and the lessons learned. The main objectives of this research component were to

- 1) Investigate and describe the phenomenon of curriculum implementation in several Latin American countries and the US,
- 2) Compare the processes of curriculum implementation among the Latin American sites, and
- 3) Draw lessons from these experiences that have much wider applicability.

To achieve these objectives the study was designed to answer the following questions:

- 1) Which of the breastfeeding units were implemented?
- 2) Why were these particular units chosen and how?
- 3) How was the breastfeeding module (or units) implemented (content, actors, processes, structures) and with what results?

The analysis of case study data and the lessons learned are contained in Section IV of this document.

A unique aspect of this project is the collaboration and support of the Pan American Health Organization/World Health Organization (PAHO/WHO). PAHO, which provided logistic and scholarship support for the original seminar, is also the publisher of the book *Lactation Education for Health Professionals*. In addition, twenty nursing, medical, and other leaders from Central and South American universities and health services as well as others around the world have contributed to the development and testing of the breastfeeding module. This fruitful collaboration legitimizes the efforts of the project to maximize local expertise and resources.

For a program such as this to have an effect, linkages for providing sound breastfeeding counseling and lactation services have to be established beyond the university setting. In the different countries, project collaborators had to reach into hospitals, community clinics, and other local health care settings. The program has thrived primarily because of the interest and dedication of the professionals involved in

each of the countries, whose work was supported by the investigators External support has been focused principally on technical and peer consultation (Limited seed funds were provided)

Significance of the Project

The education of health professionals in breastfeeding during their formative years has been identified as a priority for the Region of the Americas by the Pan American Health Organization in their response of June 1991 to the Innocenti Declaration of 1990 (PAHO, 1991) (The Innocenti Declaration is discussed in Section III) This project has contributed to that objective Furthermore, the approach used in this project fosters the participation of faculty and providers at every level, from development to evaluation of breastfeeding teaching project participants have tested and used a breastfeeding module that they also helped to develop

This project is also significant for several other reasons First, it is among the first in the MCH field to develop and test curricula Second, it fills the gap in the breastfeeding education and promotion field by concentrating on the introduction of lactation education into health professional schools Its objective is not to prepare lactation specialists, but to ensure that nurses, nurse-midwives, nutritionists, physicians, and others graduate with positive attitudes toward breastfeeding, can promote breastfeeding with other professionals and in the community, and can educate mothers about how to breastfeed Third, the project complements the policy-oriented activities of the World Health Organization (WHO), PAHO/WHO, The United States Agency for International Development (USAID), and the United Nations Children's Fund (UNICEF) It also complements the activities of other excellent groups such as Wellstart or the International Baby Food Action Network (IBFAN), which focus on the in-service training of the health services delivery team, La Leche League, which focuses on community education, and professional groups

Commentary

While the long-range objective of this project is to have the module adapted and integrated into the curricula of health professional schools, such adaptation and integration cannot happen overnight Therefore, the module is designed so that it can also be used as an independent teaching tool in a variety of educational settings In addition, the module is designed so that it can be adapted easily to meet the needs of various instructors and audiences The implementation of the module in this manner is achieving greater, more rapid results than could be achieved by waiting for the full and "official" integration of the module into all curricula

While no one strategy or activity can, by itself, ensure success, the investigators believe that the multidisciplinary and peer-team approach applied to the development and testing of this module is more likely to achieve meaningful results that are relevant to the sociocultural characteristics of different populations, to the specific contexts within which health professional schools function, and that are likely to enhance the sustainability of breastfeeding education efforts

In each country involved with this project, health professionals from universities and the health care delivery systems have worked together to ensure that 1) the education and training of health professionals is in the national health agenda, 2) breastfeeding education is coordinated with services, and 3) those services respond to the needs of the population This local and international partnership,

which is dedicated to working at all levels of the health care system to educate health professionals who can respond to the needs of communities for child spacing and child survival, has offered the greatest opportunity for success

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III THE CONTEXT OF BREASTFEEDING

The project "Lactation Education for Health Professionals" did not occur in a vacuum. To fully understand its purpose and impact, and to appreciate readily its contributions to global efforts for child survival and child spacing, it must be placed in the global gestalt of breastfeeding programs. This section provides an overview of the recent global landmark events that provided the impetus and the context for the development of a breastfeeding module for the pre-service education of health professionals.

Global Child Survival Policies

The Convention on the Rights of the Child, which was adopted by the United Nations on November 20, 1989, reflects the unanimous view of member countries that the lives and moral development of children should be a global social concern and receive priority attention (UNICEF, 1990).

The convention, which represents unique cooperation among governments, United Nations' bodies, and non-government organizations (NGOs), is the first agreement to legally define children's rights and provide standards for their well-being. Among the rights of children are survival (shelter, nutrition, medical services), development (education, play, access to information, freedom of religion and thought), protection (against exploitation and abuses), and participation (freedom to express opinions and participate in social life). These rights provide a yardstick against which progress for children can be measured.

The 1989 Convention on the Rights of the Child has served as a guideline for establishing global goals for children in the 1990s. These goals are geared toward ensuring the survival, protection, and physical, emotional, and social development of children. As a consequence, intergovernmental organizations, NGOs, academic institutions, and grass roots groups developed plans to unite their efforts and match their goals to those of the convention.

Breastfeeding Policies

The decline in the practice of breastfeeding around the world was first documented in the late 1970s and early 1980s (Clavano, 1982, Popkin et al, 1982, Mata, 1984). It created a new awareness on the part of governments and international agencies of the effects that infant feeding practices other than exclusive breastfeeding have on child morbidity and mortality, especially in developing countries.

In 1979, WHO and UNICEF urged governments and non-governmental organizations to establish policies to control the marketing of breastmilk substitutes and to promote breastfeeding (WHO/UNICEF, 1981). Subsequently, in 1981, the World Health Assembly adopted the "International Code of Marketing of Breastmilk Substitutes" (WHO, 1981). Since then, many countries have successfully enforced the application of the code and are promoting breastfeeding.

In follow up to these earlier activities, WHO/UNICEF published in 1989 "The Ten Steps to Successful Breastfeeding." These steps include writing breastfeeding policies, training providers, providing information and support to breastfeeding women, practicing rooming-in, encouraging breastfeeding on

demand and the establishment of mothers support groups, and giving no artificial teats or beverages other than breastmilk. These ten steps became the basis for further policy and practice initiatives, as will be demonstrated.

During the decade of the 1980s, these positive actions towards the promotion of breastfeeding worldwide were strengthened by the cooperation of major international agencies. In the mid-1980s, a group known as the ad hoc Interagency Group for Action on Breastfeeding (IGAB) was formed for the purpose of examining alternative approaches to the protection and promotion of breastfeeding around the world (Saadeh et al, 1993). The Georgetown University Institute for Reproductive Health (formerly the Institute for International Studies in Natural Family Planning) served as Technical Secretariat of IGAB. The IGAB group, which included USAID, WHO, UNICEF, and the Swedish International Development Authority (SIDA), contributed to the understanding of the breastfeeding situation around the world by bringing together international breastfeeding experts to examine the multidisciplinary aspects of breastfeeding. The issues addressed by this group in a series of meetings included breastfeeding definitions (Labbok and Krasovec, 1988), health care practices (Labbok, 1990, Labbok et al, 1990), women, work, and breastfeeding (WHO/UNICEF, 1990, Van Esterik, 1990), and mothers' support groups (Labbok, 1989). IGAB's efforts for the advancement of breastfeeding promotion also included two important technical meetings on 1) breastfeeding definitions, and 2) health care practices.

The work of IGAB culminated in 1990 with the organization of a third technical meeting on "Breastfeeding in the 1990s." This meeting, which was held at WHO in Geneva in June 1990, was the forerunner of the global policy makers meeting of July-August 1990 which was held in Innocenti, Italy.² The Innocenti Meeting was the first global landmark meeting of policy leaders specifically related to breastfeeding. A key outcome of this meeting was the Innocenti Declaration which asserts that as a global goal, all women should be enabled to practice exclusive breastfeeding and all infants should be fed exclusively on breastmilk from birth to four to six months of age in order to achieve optimal maternal and child health and nutrition. This declaration was produced and adopted by participants in countries representing all regions of the world, WHO, UNICEF, USAID, and SIDA (UNICEF, 1990).

In addition, the declaration includes operational targets for 1995 and calls upon international organizations to take actions to protect, promote, and support breastfeeding, and to encourage the development, monitoring, and evaluation of breastfeeding policies at the country level. The objectives for 1995 include the enactment of legislation to protect breastfeeding rights of working women, the implementation of the principles of the International Code of Marketing of Breastmilk Substitutes, the implementation of the "Ten Steps to Successful Breastfeeding" in maternities, and the establishment of national breastfeeding coordinating committees.

Parallel to these global initiatives, and since 1982, USAID has promoted breastfeeding as part of its child survival initiatives in child spacing, diarrheal disease control, and nutrition. For USAID, breastfeeding is important because it provides essential nutrients and early immunity to infants, it lowers the risk and consequences of diarrheal disease and acute respiratory infection, and it lengthens the interval between births (Brady, 1990). During the last decade, USAID has supported breastfeeding

² The results of this Technical Meeting have since been published by WHO and are entitled, Breastfeeding: The technical basis and recommendations for action.

promotion, education, and research around the world, including the project presented in this document, which was supported through a cooperative agreement with the Georgetown University Institute for Reproductive Health

In June 1991, The Pan American Health Organization (PAHO) called a meeting of the Regional Consultative Group on the Promotion of Breastfeeding. The main purpose of the meeting was to formulate a regional plan of action to coordinate breastfeeding efforts in the Americas. In addition to PAHO advisors, the Regional Consultation Group included representatives of WHO, UNICEF, USAID, governmental and non-governmental organizations, and academic institutions

Following UNICEF's 1989 Declaration on the Rights of the Child, the 1989 WHO/UNICEF "Ten Steps to Successful Breastfeeding," and the 1990 Innocenti Declaration, WHO and UNICEF launched the Baby Friendly Hospital Initiative (BFHI) in February of 1992. The BFHI has as its main purpose "encouraging hospitals and health care facilities, particularly maternities wards, to adopt practices that fully protect, promote, and support exclusive breastfeeding from birth" (UNICEF, 1992, p 2). The "Ten Steps to Successful Breastfeeding" (see Table 2) have been accepted as the minimum global criteria for attaining the status of Baby Friendly Hospital. Becoming a baby friendly hospital is a process which starts with hospitals' self-appraisal of their rules and regulations --or the lack thereof, their standards of practice concerning the birthing process, the lodging of mothers and infants, and the feeding of babies, and the expected roles of hospital personnel

Table 2 Ten Steps to Successful Breastfeeding

1	Have a written breastfeeding policy -- routinely communicated to all health staff
2	Train all health staff in skills to implement this policy
3	Inform all pregnant women about the benefits and management of breastfeeding
4	Help mothers initiate breastfeeding within half an hour of birth
5	Show mothers how to breastfeed, and how to maintain lactation even if they should be separated from their infants
6	Given newborn infants no food or drink other than breastmilk, unless medically indicated
7	Practice rooming-in (allow mothers and infants to remain together) twenty-four hours a day
8	Encourage breastfeeding on demand
9	Give no artificial teats or pacifiers (also called dummies or soothers) to breastfeeding infants
10	Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic

Source: UNICEF 1992

Within the policy context outlined above, the breastfeeding module is a response to the expressed interest of several countries in Latin America to enhance and/or establish lactation education in their health professional schools

As previously mentioned, the breastfeeding module was developed not for the training of breastfeeding management specialists, but as a tool for faculty and educators to ensure that new graduates had positive attitudes towards and could provide basic education on breastfeeding. The

development of the module was based on several important principles which reflect global breastfeeding policies and initiatives also previously discussed. These principles are the following:

- Breastmilk provides complete nutrition for the infant and significant immunological protection
- Exclusive breastfeeding is central to not only child survival but to child spacing as well
- The mother-child unit (physically, psychologically, and biologically) must be placed in their historical, sociocultural, technological, economic, and political context
- Women have the right to receive accurate information on breastfeeding, and adequate support when they choose to breastfeed
- Faculty of health professional schools and health service providers must work together to affect policy change at the hospital and maternity ward level in support of breastfeeding. This is particularly important in those sites where students conduct their clinical practices
- Breastfeeding education at the school level, not complemented and corroborated by actual practice--whether in the clinic or in the community--is not likely to achieve the desired results of the module

These principles are fully consistent with the premises of the Innocenti Declaration, and those of the Baby Friendly Hospital Initiative.

IV LESSONS LEARNED

This section addresses the lessons learned during the breastfeeding module testing process. Lessons drawn from the general experience of all the sites are presented. Particular attention will be given to the lessons learned in relation to the Lactational Amenorrhea Method (LAM) and the contribution of interventions such as the breastfeeding module to the UNICEF Baby Friendly Hospital Initiative.

The testing was initiated in ten sites involving seven countries (See Appendix 5). Of these ten sites, five completed the full testing cycle and prepared formal case study reports, which are summarized in the next section. Due to local circumstances, most of the remaining sites were unable to fully participate in the testing. Nevertheless, their efforts in the early phases of the testing contributed valuable information that has been used in the identification and discussion of the lessons learned presented below.

The ten sites were made up of six university nursing schools and four Ministry of Health hospitals. The testing that took place in the nursing schools targeted pre-service education, whereas the testing in the hospitals focused on in-service education. Testing the module for in-service training in a few selected sites was deemed appropriate 1) to demonstrate the flexibility and applicability of the module to different empirical teaching situations, and 2) in recognition of the fact that frequently these hospitals serve as clinical practice sites for nursing students, and therefore, breastfeeding practices in these sites must support the theoretical teaching received by students.

In the nursing schools, the testing was initiated by the presentation of the breastfeeding module by project collaborators to their faculty who, in turn, reviewed it for comprehensiveness. In all sites, after establishing that the core teaching units of the breastfeeding module were complete, they then went on to identify the gaps in their own curriculum and where units or portions of units from the module could be incorporated. The final decision as to the units to be tested was made by the nursing faculty and their dean, and was based on the following criteria:

- the units that complemented their existing curricula
- their own knowledge of and comfort with teaching the unit
- the availability of technical expertise within or outside the school on specific topics
- the availability of accurate, up-to-date educational materials

All units were tested at least once, and most units were tested in all sites, the clinical units were emphasized in most sites because the teaching of clinical breastfeeding skills was the weakest component in their curricula, and their belief that students need clinical practice in this area. This is consistent with the breastfeeding module guidelines which state that effective breastfeeding education in health professional schools requires both theoretical knowledge and practical training.

In the hospitals, the module was used in its entirety with some units receiving greater emphasis, principally those related to clinical skills. These units include those interventions that would contribute to the creation of a Baby Friendly Hospital.

In the following discussion, the lessons learned are divided into two categories: 1) those that relate to content or technical breastfeeding issues, and 2) those that relate to process or curricular change issues. In some instances, the lesson contains elements of both categories, in those cases, it has been grouped

with the category whose issues play a larger role. Rather than repeating it in both categories, all issues are discussed within the dominant category.

Content or Technical Breastfeeding Issues

1 National policies that promote and support breastfeeding facilitate the integration of breastfeeding into the course of nursing studies by validating its importance

The increasing global attention given to breastfeeding by major organizations such as WHO, UNICEF, and others described earlier in this document, has prompted national level breastfeeding initiatives in most of the Latin American countries as well. Chile, Colombia, Ecuador, Guatemala, Honduras, Mexico, and Peru are among those with well developed breastfeeding promotion campaigns, and it was in a number of these countries that the module testing was most successful and its impact most far reaching. In these countries, breastfeeding is promoted primarily for its child survival effects, and only secondarily for its child spacing potential. All of the project collaborators agreed that if breastfeeding had not been of such importance to their governments, or if they had been trying to introduce a less emphasized topic, there would have been far greater obstacles to overcome.

In some cases, the national level importance given to breastfeeding went beyond simply making it "politically correct" and extended to more tangible forms of support that greatly enhanced the successful testing of the module. For example, in Chile, there was greater availability of current information on breastfeeding, more research done in-country on breastfeeding, a larger pool of local experts to be drawn upon, and a service provision infrastructure that already included elements in support of breastfeeding. This was also true, although to a lesser degree, in Honduras, Peru, and other countries. In Ecuador and Cali, Colombia, among other sites, the project collaborators were recognized for their breastfeeding expertise and sought out to serve on national level and/or Ministry of Health committees responsible for defining national maternal child health policy and practices, designing breastfeeding promotional campaigns, developing training programs for ministry personnel, and so forth. In these roles, project collaborators were able to reach out beyond their university or hospital setting and share their knowledge and skills with a wider audience.

The existence of such national policies is not enough to ensure success, however, unless other factors, which will be discussed later, are present, it is extremely difficult to effect change in breastfeeding education specifically, or curricular change in general. In the case of Peru, national policy is favorable to breastfeeding. There are laws in support of the International Code of Marketing of Breastmilk Substitutes, mandating on-site child care facilities for businesses employing twenty-five or more females over the age of eighteen, and providing forty-five days of postnatal maternity leave. Yet another law charges the Ministry of Health with protecting breastfeeding through the education of mothers and communities and the institution of practices in the health services delivery system, such as rooming-in and early attachment, that are favorable to breastfeeding. Unfortunately, the existence of these laws has not been widely publicized, nor are they enforced. Under these circumstances, there may be more resistance to overcome among colleagues and within the health care system, and education of mothers regarding their rights, before real progress can be made in improving breastfeeding education.

Yet another possible scenario is demonstrated by Honduras. In Honduras, the national level policies are in place and the Ministry of Health is very interested in revising curricula--both nursing and medical--but the nurses themselves have been slow getting started. Meetings were held to review the

module and evaluate the breastfeeding content of the existing curricula, but further action has been limited. The same type of situation occurred in Guatemala where the project collaborator approached the School of Nursing to discuss collaborating on implementation of the module. Unfortunately, the school's administration was not interested, despite the high priority given to breastfeeding by the Ministry of Health and the National Commission for the Promotion of Breastfeeding.

Interestingly, national policies may actually make some aspects of breastfeeding education more difficult. For example, in Colombia there was a very active breastfeeding promotion campaign from 1973 to 1982 which unfortunately did not promote exclusive breastfeeding, but rather early supplementation beginning at fifteen days after birth. This misinformation had to be overcome among the nursing faculty itself before testing of the module could begin, and then dealt with again when the students moved into their clinical practice areas.

Finally, it was demonstrated during the testing that the importance given to breastfeeding is relative to the other pressing national health concerns of the moment. As illustrated by the experience of Costa Rica, priorities can shift away from breastfeeding in response to any number of more immediate problems, in their case a series of devastating earthquakes. At that time, simply ensuring the survival of thousands of people forced the focus of attention away from breastfeeding and led to the abandonment of the module testing after only the preliminary stages.

2 Guidelines on the technical content to be included in the curricula are paramount to facilitating its successful revision

Guidelines ensure that all pertinent information is included in the revised curriculum, that the information presented is accurate and up-to-date, and that all faculty involved are teaching the same information. This is particularly true when the faculty involved in revising and teaching the new curriculum are not highly knowledgeable in the technical area to be covered, in this case, breastfeeding. They also ensure the replicability of the revisions made in future years and in other institutions.

The breastfeeding module served as the guidelines in the project presented here. All project collaborators reported that without such a document it would have been much more difficult to gain the collaboration of their faculty colleagues and to ensure the continuity of teaching. It facilitated the development of lesson plans and a detailed curriculum that was useful throughout the school or hospital.

Project collaborators found the fully developed lesson plan on the Lactational Amenorrhea Method (LAM), which accompanied the module, to be particularly useful both in itself and as a sample of how to develop other units. The unit on LAM was also used in presentations to other faculty and colleagues who were not always knowledgeable, and sometimes skeptical, about this method's effectiveness. The scientific content and the direct style used in the presentation of the information about LAM contributed to the usefulness of this unit.

There was general consensus that all the units of the module should be developed in the same manner to enhance its utilization in a wide variety of teaching situations.

3 Availability of reference materials in the appropriate language is essential to support and facilitate the development of curricular content

From another perspective this can be restated as those units for which supporting reference materials are not available will not be included in the revised curriculum, no matter how important they may be. A limited amount of materials was supplied to the test sites as part of the project, but it was surprising how little other information was available to the schools, with even less available to the hospital sites. The greatest difficulty encountered in responding to the requests from the sites for further information (and they came from all sites) was the limited amount available in Spanish. There is a definite need for additional high quality educational materials on breastfeeding in Spanish, and this is probably true of other languages as well.

These reference materials serve another purpose as well. They are vital to correcting misinformation and overcoming the skepticism of faculty, professional colleagues, and service personnel towards both the new breastfeeding information that needs to be incorporated into the curriculum and the changes in service delivery practices in the clinical areas necessary to support the theoretical learning of the students. This was demonstrated in Colombia where, as mentioned earlier, the erroneous information of the national breastfeeding campaign had to be corrected within the faculty itself before any curricular revision could be started.

Both uses of reference materials are particularly significant for those aspects of breastfeeding that are highly controversial or are markedly different from past beliefs. The Lactational Amenorrhea Method (LAM) is a key example of this point. Despite the ever growing body of research supporting the highly effective use of breastfeeding as a method of family planning in the first six months postpartum, this information has not been widely disseminated in local languages. Many health professionals have had little exposure to this concept, and even those who have are skeptical of its effectiveness. Clearly, the first step towards incorporating LAM into curricula is the education of faculty and service providers, but without appropriate materials it is virtually impossible. This is one reason that the module unit covering LAM was chosen to be fully developed as a teaching plan and attached to the module. Nevertheless, even the detail provided was insufficient and many requests were received for further information on this particular topic.

4 Faculty trained in and/or knowledgeable about breastfeeding are also necessary to act as resource persons to all who are involved in teaching breastfeeding

This lesson goes hand-in-hand with the previous one. Many times reference materials are not enough, nor is every faculty or service provider working with the students knowledgeable about all aspects of breastfeeding. All involved need to have a reliable source for more detailed explanations and practical information. Ideally, this resource would be someone at the school who has received additional training in breastfeeding, but outside experts can help to fill the gap if there are no such faculty members. A number of testing sites identified having faculty trained in breastfeeding as a facilitating factor to implementing the module, they also reported that outside experts are of great assistance, particularly to the hospital-based sites. The fact that such individuals exist is attributable to the importance given breastfeeding in national health policies as discussed in the first lesson learned.

The situation in Cusco, Peru, provides an interesting picture of what can happen when the faculty does not have expertise in breastfeeding or access to adequate reference materials or outside experts. As part

of a breastfeeding communications project conducted by Georgetown University with a local private communications agency in Cusco, several courses were offered to local health professionals that increased their awareness of and interest in breastfeeding. In addition, a small breastfeeding reference library was established with the communications agency, a physician and a nurse who were part of the project had also received training at Wellstart. As a result of these activities, the local schools of medicine and nursing--while unable to participate fully in the module testing--have begun to make revisions to their curricula and encourage students to do independent study and research, referring them to the communications agency for information and assistance. The agency had a hard time carrying out its work because of the frequent requests for information from students and faculty, until they were able to set up guidelines for requests from the schools.

5 A clinical component is necessary to effectively teach breastfeeding

Recognizing that effective breastfeeding promotion requires more than theoretical knowledge, all sites included a clinical component in their curricular revision. Usually this practicum took place in the obstetrical and/or pediatric nursing courses, and focused on prenatal counseling, immediate postpartum care, or the period up to the first well baby checkup. Some sites, such as Chile, were fortunate to have already existing lactation clinics with which to work. Others, such as Cayetano Heredia University in Peru, had to create a niche for breastfeeding counseling in the existing pre- and postnatal outpatient services, the students at Cayetano Heredia were even able to follow-up some of their clients in the community.

6 A good relationship between faculty and service providers facilitates the transfer of theoretical knowledge into practice

This and the previous lesson are mutually supportive. Clearly, for the clinical component of breastfeeding education to be as effective as possible, it must take place in an environment that encourages and facilitates the transfer of theoretical knowledge into practice. In other words, service personnel must also be convinced of the importance of breastfeeding promotion and support, be up-to-date in their information, and employ practices such as rooming-in that allow optimal breastfeeding.

To ensure this atmosphere for their students, nursing faculty must work closely with service personnel in a positive manner. Their attitude toward service providers must be respectful and collegial, so that they will be open to learning and changing their behaviors. It may be necessary to work closely for an extended period of time with the clinicians to create the proper learning environment for their students. In Bogota, Colombia, nursing faculty worked closely with the hospital administration to increase their understanding of breastfeeding and their motivation to support it. This resulted in the training of a special interdisciplinary and interinstitutional team at Wellstart, who now serve to guide all breastfeeding education programs at the university and the hospital. In Cali, Colombia, seminars were held for the nursing personnel with whom students would be working. Even where no special activities with clinicians took place, faculty report a change in service provider attitudes and behaviors simply from working side by side with the students, project collaborators believe that this spillover effect would not have taken place if a good relationship had not existed between faculty and hospital staff.

The spillover effect to service providers was also demonstrated in sites where the module was used for in-service education. At the Maria Auxiliadora Hospital in Peru, it was demonstrated that training just a few nurses from an individual hospital who then took the information back to their colleagues, as well as utilizing the hospital for clinical practice, resulted in a decrease in the amount of time newborns are observed after birth from eight hours to three. The training led to the initiation of rooming-in and the development of standard orders for newborns for breastfeeding rather than formula. These activities have also prompted the School of Medicine at Saint Martin University, which uses the hospital for its students, to include information on breastfeeding in its obstetrics course and invite the project collaborator to participate as a lecturer.

7 Interdisciplinary action is the most effective

While all sites felt that they had been successful in improving their students' education in breastfeeding and that they had some positive influence on nursing staff's attitudes and behaviors, they also felt that they could have had an even greater impact if they had been able to gain the collaboration of other disciplines. In general, they were able to collaborate with other nurses, midwives, nursing assistants, and nutritionists, but did not have a great deal of success with physicians. Unfortunately, it is the physicians who are most often the decision makers in the health care system and are viewed by mothers as the most knowledgeable and powerful, and therefore the most believable. At the same time, their medical education has taught them very little about breastfeeding in general and even less about how to promote and support its initiation and maintenance. As a consequence, many physicians are at best uninterested in breastfeeding issues, while others are openly skeptical of or even hostile to the changes that need to be made in hospital practices to support breastfeeding. On the other hand, there are physicians who are very supportive of breastfeeding and in those instances a great deal of progress can be made. For example, in Mexico City changes were made in one of the principal hospitals that ranged from instituting rooming-in, attachment immediately after birth, and banishment of bottles and formulas, to maternal education programs and in-service training of all levels of hospital staff thanks to the collaborative efforts of all the health disciplines. (Both the programs for mothers and the staff training utilized portions of the module.) Without the backing of the highest level administrators and physicians such sweeping changes would not have been possible in a relatively short period of time and the hospital would not have been certified as a Baby Friendly Hospital by UNICEF.

In some sites, the project has led to improved collaboration between physicians and nurses. As mentioned earlier, in Peru the project collaborator was invited to make a presentation on breastfeeding to medical students completing their clinical rotation in one of the hospitals participating in the in-service program based on the module. A similar situation occurred in Cali, Colombia, where the project collaborator was asked to teach breastfeeding in the medical school, thereby reaching all their students. Other sites feel they have also improved relations with individual physicians, although not as noticeably.

Physicians are also the most skeptical about the effectiveness of the Lactational Amenorrhea Method (LAM). With their scientific orientation they dismiss the fertility impact of breastfeeding as an old wives' tale and/or demand rigorous proof of its effectiveness. Fortunately, study results defining the effectiveness of LAM are increasingly available, it will now be necessary to get those results both widely disseminated and read or physicians (and others) will remain skeptical and act as barriers to breastfeeding promotion.

Process or Curriculum Change Issues

1 The support of the nursing school's administration is vital to successful curricular change, without this support change may not have been possible

In all university sites, the first step in the testing process was to present the module to the full faculty and administration of the nursing school and gain their support. All project collaborators felt that if they had not been able to rely on the support of the administration, they would not have been able to implement as much of the module as they did, they would have been limited to whatever they could do within the context of their own teaching responsibilities. The backing of the administration allowed them to involve other faculty in an integrated manner and legitimized their efforts. It also added to their credibility when working with the personnel in the clinical practice areas.

In some cases, however, the support of the administration was not enough to ensure successful curricular change, and linkages with the broader university community and health care system were sought out. As mentioned earlier, in Bogota, Colombia, the nursing school administration worked closely with the university and hospital administrations to ensure both the appropriate environment to support theoretical teachings and the official recognition of the curricular changes necessary for their longevity.

It is also important to note that the support given to curricular change can be directly tied to specific members of the administration, when that individual leaves his/her position, the support for the changes made and/or for ongoing change may be considerably less or disappear altogether. This is the case in Bogota, Colombia, where the dean of the nursing school was one of the project collaborators and highly knowledgeable about breastfeeding. She has left the university since the completion of the project, and the new dean is not as active in her support of breastfeeding, which is having an impact on further actions in this area. The loss of other personnel involved in the curricular change, whether they be administration, faculty, or service providers, leads to the loss of both commitment to and the technical knowledge necessary for the continuation of the process.

This would indicate the need for measures that would strengthen the institutionalization process. Among them would be the creation, in the early stages of the process, of a broad-based constituency for breastfeeding education in the school. This group, which should include educators, other schools, service providers, and professional leaders, would act as an advocate for curricular change. Their influence would minimize the loss of committed staff.

2 The support of faculty colleagues is necessary to ensure successful change

To be truly successful, the desired change, whatever the topic area, must be incorporated simultaneously into as many areas of the course of study as appropriate and possible. Unless all the faculty that should be involved are willing to make the effort, the change that is made will have limited impact. At the very least, colleagues must "buy into" the need for change and the content of the change so that they do not undermine it.

3 Participation of the faculty in the development of the new curriculum increases their commitment to it and their motivation for its implementation

In this case, not only were the project collaborators involved in the development of the module but it took place at a seminar in the United States. Not only did this increase their ownership of the module, but the international forum increased their credibility with their peers and their self-confidence to act as change agents. This self-confidence was also based in the new knowledge and skills they acquired at the seminar.

In addition, working in teams, whether by country, city, or best of all, institution, as was done in this project, provides needed peer support and technical expertise that can be drawn upon as needed. While this network provided them with a great deal of support, they were also encouraged to develop their own networks, which many of them did. They made contacts with breastfeeding experts in their own countries, other international organizations, and within their governments and universities.

4 At the level of the individual nursing school, it is possible to achieve curricular change where there are technically skilled and motivated faculty who have the financial and operational support of the administration to implement the change

While recognizing that there are a number of constraints inherent in any curricular change, it was also recognized by all that change is possible given appropriate motivation and operational support. One frequent concern when curricular change is suggested, particularly when it will involve the addition of material to an existing course of studies, is that there simply is not enough time. Given the ever-increasing knowledge and technology that the well-prepared health professional needs to learn, any additions are viewed as difficult if not impossible. Faculty are already overworked and overcommitted. However, breaking down the new information into smaller units that can be incorporated into the existing courses, rather than creating a new course, as was done with the breastfeeding module is one way around this concern. Another is to identify material that can be deleted or cut back due to the new information, for example, with the inclusion of breastfeeding information less time would need to be spent on preparation of formula.

There are also financial concerns when implementing curricular change. New information requires new educational materials for use by faculty and students, additional training for faculty and clinicians, perhaps expanded clinical time and facilities, and so forth. Neither universities nor public health systems are well funded, and these limitations can be severe. Alternative sources of funding need to be sought out, resources pooled between institutions, and other creative methods considered for overcoming this problem. At the same time, it should be pointed out that this project demonstrates how much can be accomplished with very little additional funding. Testing sites were provided with seed money only, intended primarily for the costs that would be incurred by the testing process itself, rather than for supporting the curricular change. As this document demonstrates, schools and hospitals were able to make significant changes in their breastfeeding teaching and practices without large amounts of financial support.

Finally, it was recognized that curricular change is a long, slow process but in and of itself provides a substantial learning experience.

V CASE STUDIES

The research component of this project applied a case study methodology. A case study is an empirical inquiry used to investigate a contemporary phenomenon within its real-life context using multiple sources of evidence (Yin, 1989). In this study, both quantitative and qualitative data were utilized for analysis. The units of analysis were the breastfeeding module itself, that is, the number and content of the units chosen for testing, its adaptation, approval, and implementation processes, and the long-term or sustained impact of the testing.

Case study methodology encompasses data collection from several sources such as documents (memoranda, announcements, reports, articles, student papers, research, proposals, agreements), archival or permanent records (organizational records, budgets, survey data, census records, educational policies), interviews, direct observation, participant observation, and physical artifacts such as graphics, questionnaires, or computer printouts. Wherever possible, the investigators used multiple sources of evidence converging on the same facts or findings to show a chain of evidence leading from the objectives asked to the data collected to the conclusions drawn, and to compile a case study database that could be subjected to secondary analysis by the principal investigators. These measures were taken to ensure the quality and replicability of the study.

Each case study was conducted following the same protocol. This protocol called for a general case study report presented according to a common format and the completion of a questionnaire. The questionnaire or data collection guidelines is presented in Appendix 3 and the case study report outline in Appendix 4. Both were developed at the start of the project by the principal investigators in collaboration with the authors of the case studies. The case study reports were structured to describe the type of program where the module or unit(s) was implemented, the process followed for the implementation, the obstacles and facilitating factors encountered, and the unanticipated results that emerged. This structure has facilitated assessment of the extent to which objectives were achieved, the comparison of the differences in experiences from one site to another, and the extraction of lessons learned that would have wider applicability.

As mentioned earlier, five sites were able to complete the testing process and prepare case study reports, a summary of each of these five reports is presented in this section. The four universities and the hospital represented in these summaries are among the most advanced in Latin America, with personnel dedicated to the promotion of breastfeeding. Summarizing their reports was not an easy task, as they contain a depth and richness of information that resists condensation. To the extent possible, the summaries portray the exact information in the reports, in some cases the written reports have been supplemented by more recent personal communications with the project collaborators. In either case the goal has been to convey the most pertinent information that will be of use to anyone interested in either breastfeeding education or curricular change.

CASE STUDY 1

Country	Santiago de Chile, Chile
Institution	Facultad de Enfermería, Pontificia Universidad Católica de Chile (School of Nursing, Catholic University of Chile)
Collaborators	Lilia Vidal, Marisol Cantwell, Maria Cartagena
Type of Program	Pre-service, undergraduate

Units of Module Used

- Clinical Skills for the Initiation and Management of Lactation
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The School of Nursing at the Catholic University of Chile is a government-supported program of five years, and one of the most advanced in the country. Their involvement with breastfeeding education has paralleled the growing importance given to it by the Ministry of Health over the past several decades. Since 1970, there have been mass media campaigns to educate mothers and families about the importance of breastfeeding, and in 1980 the Ministry of Health began providing educational opportunities for health professionals in lactation. Despite these activities and an apparent improvement in the knowledge of breastfeeding by health professionals, there has not been a complementary change in their behaviors. Hospital policies continue to interfere with rather than facilitate the successful initiation and maintenance of breastfeeding--an important factor in a country where seventy-eight percent of all births take place in hospitals. Growth standards are also too rigid and severe, resulting in unnecessary supplementation of breastfeeding.

The Catholic University team began by reviewing the existing material on breastfeeding within the course of nursing studies. It was found that most attention was given to anatomy and physiology, lactogenesis, lactopoesis, nipple preparation, and the like, and that no unifying thread brought together the content of the multiple courses in which breastfeeding was presented. A desire to create a more balanced picture, ensure continuity, and emphasize the "how to's" of breastfeeding led the team to focus on the unit of the module that dealt with the clinical skills necessary for successful breastfeeding. Portions of this unit were incorporated into Growth and Development, Pediatric Nursing, the Maternal Cycle, Clinical Obstetrics, and a practicum. Each course developed the unit with a different degree of detail according to the level of the students. Research was encouraged on problems related to breastfeeding and their clinical management. Clinical practice areas included Ministry of Health and university affiliated hospitals and a variety of out-patient clinics.

For the theoretical portion, the unit was subdivided into three sections: determining factors in breastfeeding (policies, nutrition, technique and positioning, etc.), the normal evolution of breastfeeding (anatomy and physiology, colostrum, growth patterns of breastfed babies, etc.), and clinical management of breastfeeding problems (sore nipples, engorgement, mastitis, etc.). Approximately six hours were used to cover this material, this amount of time was found to be inadequate, especially in light of all the questions the material generated. The recommendation is that at least eight hours be devoted to cover this material.

The clinical portion required an average of five weeks for completion. The students elected to focus their practicum on innovative teaching methodologies and exhibited great creativity in designing and producing audiovisual materials for use with mothers. Most of the practicum was done in out-patient clinics. One group of students designed an educational program for use in a prenatal clinic, including a tool for identifying the educational needs of the mothers as well as those at risk of breastfeeding failure. Another group participated in a well baby clinic, where they formed mothers' support groups.

To demonstrate the effectiveness of this intervention a study was conducted with the 150 mothers who were followed by students during the course of the six-month pilot study. The study showed that, of the mothers who were seen for breastfeeding problems, eighty-eight percent left the hospital or clinic with the intention to breastfeed exclusively.

Students in the hospital setting were able to develop guidelines for warming breastmilk in the milk bank without damaging it, these guidelines remained in effect even after the students left. Students guided by the project collaborators also began a program in which they trained the mothers and staff in early infant stimulation during breastfeeding episodes. An evaluation of its results is planned once 100 infants have been seen.

Unanticipated results of the module implementation included

- interest on the part of faculty in the School of Medicine, and the incorporation of medical students into the clinical activities leading to the establishment of a formal rotation for the medical students in the Lactation Clinic
- awakening of doubts regarding their own knowledge in the health professionals (doctors, nurses and midwives) providing services in the clinical areas with the students
- incorporation of the unit into the postgraduate MCH course where it received excellent evaluations from the students
- establishment of a "Breastfeeding Day," organized by nursing students who invited the medical students (120) and the faculty of both the medical and nursing schools to attend. Members of the Chilean Committee on Breastfeeding participated and gave sessions as well.
- due to the success of "Breastfeeding Day," it was decided to institute a similar day within the school of nursing itself when all activities in every department would be centered on breastfeeding.

Among the **facilitating factors** that made the module testing such a success were

- the support of the school's administration due to their recognition of its importance
- the excellent relationship between the professors at the School of Nursing and the nursing service personnel, which allowed them to work together closely.

Due to the positive experience of the breastfeeding module testing and the recognition of the importance of breastfeeding, the School of Nursing is exploring with the Chilean Nurses Association the possibility of incorporating breastfeeding education in nursing schools throughout the country. Several meetings have already taken place on this effort.

CASE STUDY 2

Country	Santa Fe de Bogota, Colombia
Institution	Facultad de Enfermería, Pontificia Universidad Javeriana (School of Nursing, Javeriana University)
Collaborators	Maria Teresa de Vergara, Edy Salazar
Type of Program	Pre-service, undergraduate

Units of Module Used

- Biological and Psychosocial Aspects of BF
- Anatomy of the Breast and Physiology of Lactation
- Nutrition of the Mother and Child during BF
- Lactation and Birth Spacing the Lactational Amenorrhea and Other Methods
- Clinical Skills for the Initiation and Management of Lactation
- History of Breastfeeding
- Sociocultural, Technological, and Political Factors that Influence BF Practices
- Current Status of Maternal and Child Health in the Country and Risk Factors for MCH
- Lactation Management Mothers Who Work Outside the Home and Other Special Circumstances
- Communication and Counseling Techniques for BF Education at the Family Level
- Lactation and Sexuality
- Interventions to Effect Change in Health Care Service Delivery Systems
- Breastfeeding Promotion at the Community and Societal Levels
- Evaluation of Breastfeeding Promotion Activities
- Communication and Teaching Skills for Health and Other Professionals

While breastfeeding has always been a common practice in Colombia, in the last few decades it has been decreasing. Traditionally, exclusive breastfeeding is continued for only the first fifteen days of life and then is supplemented with a variety of other foods. The average duration of breastfeeding is eight months. Studies have shown that infants born in health facilities begin to receive supplementation earlier than those born at home, and infants of young mothers also begin to receive supplementation earlier. Yet most mothers (ninety-nine percent) believe that breastfeeding is good for the child and ninety-five percent do breastfeed at some level of intensity.

From 1973 to 1982 breastfeeding received a high level of support from the government. A national education campaign took place, the Ministry of Health put forth a resolution in favor of breastfeeding, research was conducted to identify the current breastfeeding practices in the country, and health professionals were trained in lactation. Unfortunately, none of these activities encouraged exclusive breastfeeding.

The School of Nursing, Javeriana University, is a private institution founded in 1941. In 1981 it underwent a radical curricular change as it sought to develop professional nurses capable of providing

integrated care Breastfeeding was included in a number of courses with varying depth of detail and emphasis When reviewed and compared with the breastfeeding module, it became clear that more needed to be done

All of the units of the module were incorporated to one degree or another in each of the eight semesters of the nursing program The content was divided into that pertaining to mothers and that pertaining to infants as that is how the courses are divided in the semesters A clinical component is included in each semester As students advance through the semesters they receive increasingly intensive instruction in breastfeeding and their clinical practice becomes more community oriented In all clinical settings, students develop educational materials for use with mothers The most advanced students also conduct research on topics related to breastfeeding

Before beginning implementation of the curriculum, a meeting was held for all nursing school instructors to introduce them to the module, later, there were discussions on breastfeeding practices and the changes that the new curriculum would require At this time, there was some resistance on the part of some faculty regarding exclusive breastfeeding, the use of formulas, when to begin complementary feedings, and the indiscriminate use of bottles, etc Over time and with training, most have been convinced and have changed their practices

Nursing faculty have worked with the administration of the university and San Ignacio Hospital (which is affiliated with the university) to increase their understanding of breastfeeding and their motivation in its support, this has resulted in an interdisciplinary and interinstitutional group being trained in lactation management at the Wellstart Program in San Diego This group orients, guides, and supports all breastfeeding education programs

The module is also being used for education and training of health service providers, mothers, and other groups at the community level It has also been adopted as the guide for training professional and nonprofessional health personnel as part of a national breastfeeding project in five major cities

Implementation of the module had several **unanticipated results** First, the nursing faculty have formed an interdisciplinary and interfaculty group to analyze the health problems of Colombian women and their relation to the sociocultural, economic, and political factors in the country One of the areas being studied is breastfeeding and its relation to the health of women, families, and communities

Another result is that the nursing faculty have developed a health program for working mothers at the university, which considers the preparation, support, and guidance of the working mother in the pre- and postnatal periods as a special subprogram

Facilitating factors during the implementation of the module include

- support from the administration of the School of Nursing
- the participation of the administration and faculty in the full development of the module
- the guidance and motivation of the program coordinators at Georgetown University
- the ability of the School of Nursing and the university to train faculty members in lactation management, this was also due to financial assistance from USAID
- the motivation of the faculty members in the area of Maternal and Child Health
- selection of one among the three qualified instructors to be responsible for the breastfeeding program and to act as a consultant and guide to academic and service programs
- formation of an interdisciplinary and interinstitutional group to support breastfeeding programs

There were also a number of **restricting factors** and obstacles that had to be overcome, including

- the **resistance** of some of the instructors
- the **majority of the reference materials** were in English
- at the **service delivery sites**, there was a **divergence of knowledge and ideas** among physicians, nurses, and nutritionists regarding breastfeeding
- the **traditional use of bottles with newborns** in the hospitals

1

Not only was the testing of the breastfeeding module highly successful, but it had an importance beyond the School of Nursing. It is anticipated that it will be used to train health workers in a national project. This experience supports the usefulness of the module in a variety of situations.

CASE STUDY 3

Country Santiago de Cali, Colombia

Institution Departamento de Enfermería, Universidad del Valle (School of Nursing, University of El Valle)

Collaborator Marlene Montes de Triana

Type of Program Pre-service, undergraduate

Units of Module Used

- Biological and Psychosocial Aspects of BF
- Anatomy of the Breast and Physiology of Lactation
- Nutrition of the Mother and Child during BF
- Lactation and Birth Spacing the Lactational Amenorrhea and Other Methods
- Clinical Skills for the Initiation and Management of Lactation
- Current Status of Maternal and Child Health in the Country and Risk Factors for MCH
- Lactation Management Mothers Who Work Outside the Home and Other Special Circumstances
- Communication and Counseling Techniques for BF Education at the Family Level
- Lactation and Sexuality
- Interventions to Effect Change in Health Care Service Delivery Systems
- Breastfeeding Promotion at the Community and Societal Levels
- Evaluation of Breastfeeding Promotion Activities

In 1979, the Ministry of Health of Colombia established norms and guidelines for the promotion and protection of breastfeeding in public health institutions, this action was accompanied by a national breastfeeding promotion campaign and the International Year of the Child. Later, in 1980, they also established sanctions against those organizations and establishments that violated the rules for commercialization of breastmilk substitutes.

The School of Nursing at the University del Valle is a government institution that offers a four-year course of study to undergraduate students as well as graduate level courses. In order to implement the breastfeeding module, it was decided to integrate various units of the module into the undergraduate courses, train nurses at one of the Ministry of Health's clinics where much of the students' practical work is done, and develop educational materials on breastfeeding for use at the community level.

The units chosen are those listed above and they were incorporated into the course "Health Care of the Woman and Her Family during the Reproductive Age and the Immediate Postpartum Period." Both theoretical and practical experiences were provided to the students. During the theoretical portions, a variety of teaching methodologies were utilized including lectures, discussions, small group work, case studies, and so forth. Written materials were developed as reference materials for the students in topic areas and classes were used to field test these and other materials that were developed. In the practical experience, breastfeeding support was added to the prenatal counseling provided in the clinic area, this

served both to provide correct information to mothers and to access the knowledge and skills acquired by the students from the theoretical presentation of the module. In the delivery room, immediate breastfeeding was established in several institutions, as was rooming-in, wherever possible. Finally, a number of mothers that had been counseled in breastfeeding in the prenatal clinic were followed up after birth to evaluate the teaching they had received. It was found that these mothers were able to overcome minor breastfeeding problems more easily and continued breastfeeding their children for at least three or four months, and some even longer.

To train the MOH clinic nurses, a workshop of twelve hours (three sessions of four hours each) was planned and carried out. Participatory methodologies were used. A total of six pamphlets were designed and printed, they were left with the clinic personnel for distribution to mothers during teaching/counseling sessions. These materials are being published by the National Social Security Institute and are being distributed to their clinics and health posts throughout the area. A follow-up of the utilization and applicability of the materials is planned, with the hope of expanding their use to the national level.

Facilitating factors for the module's implementation included the following:

- the existence of a curriculum committee at the School of Nursing that was able to examine the module in light of the existing curriculum and recommend that portions of the module be incorporated
- the selection of clinical practice areas that reached a wide range of clients and offered a number of services such that they were able to accommodate the changes implemented by the students
- the existence of permanent ties and coordination with these institutions both at the administrative and service personnel levels which allowed for training of their personnel as well as the students
- the receipt of bibliographic materials from Georgetown University, the Pan American Health Organization, and others which facilitated the teaching of a number of subject areas

A number of **obstacles** existed as well. There were difficulties in sharing the module with all the faculty due to the number of instructors involved and scheduling conflicts. Only fifty percent were ever exposed to it. Because there was no history of such activities, there was resistance to promoting and developing interdisciplinary activities at the service sites. Finally, there were difficulties in coordinating with other professionals who are doing research on breastfeeding and in completing the training of service personnel (nurses) due to the busy work schedules of all involved.

Additional work remains to be done. Certain units need to be developed further and included in their totality in the course of study, this will necessitate additional assistance with reference materials, etc. The module must be incorporated throughout the course of study and not just in one or two courses as was done in the testing. Continued efforts are necessary to involve all the faculty and other breastfeeding researchers in both curriculum-related and outside activities, and to train service personnel, especially in those institutions where the students carry out their clinical practice. Student research in breastfeeding should be encouraged (two students are currently carrying out such projects). Follow-up of the students who were involved in the testing of the module would provide valuable information for its future use.

Although the School of Medicine was not involved in the testing process, their observation of the process and outcomes has led them to invite Ms Montes de Triana to teach a session on breastfeeding as part of the medical school curriculum

CASE STUDY 4

Country	Lima, Peru
Institution	Escuela Nacional de Enfermería Arzobispo Loayza, Universidad Peruana Cayetano Heredia (School of Nursing, Archbishop Loayza, Cayetano Heredia University)
Collaborator	Maria Elizabeth Ahumada de Meneses
Type of Program	Pre-service, undergraduate

Units of Module Used

- Biological and Psychosocial Aspects of BF
- Anatomy of the Breast and Physiology of Lactation
- Nutrition of the Mother and Child during BF
- Lactation and Birth Spacing the Lactational Amenorrhea and Other Methods
- Clinical Skills for the Initiation and Management of Lactation
- History of Breastfeeding
- Sociocultural, Technological, and Political Factors that Influence BF Practices
- Current Status of Maternal and Child Health in the Country and Risk Factors for MCH
- Lactation Management Mothers Who Work Outside the Home and Other Special Circumstances
- Communication and Counseling Techniques for BF Education at the Family Level
- Lactation and Sexuality
- Interventions to Effect Change in Health Care Service Delivery Systems
- Breastfeeding Promotion at the Community and Societal Levels
- Evaluation of Breastfeeding Promotion Activities

Breastfeeding, while declining, is still widely practiced in Peru. Almost all infants are breastfeeding upon leaving the hospital, but supplementation begins very early, within several days after birth. This practice is erroneously encouraged by many health professionals. Only a limited number of hospitals offer practices that are vital to the successful initiation of breastfeeding, such as rooming-in, despite the fact that the Ministry of Health is mandated by law to provide them.

The School of Nursing, Archbishop Loayza is a government supported institution, affiliated with the University Cayetano Heredia, one of the most respected universities in Peru. A five-year program in nursing is offered, with clinical practice taking place in Ministry of Health hospitals, the Social Security System hospitals, private clinics, and health centers in the community as well as Arzobispo Loayza Hospital itself. Approximately 150-200 students are enrolled in the nursing program at any one time.

The first step prior to implementing the curriculum was to review the current curricula being used throughout the five-year course of studies (there was no one course dedicated to breastfeeding). Specifically, the courses Women's Health and Development, Human Growth and Development, and Pediatrics were considered. It was found that while breastfeeding-related topics were presented within these courses, the material was presented only superficially, with an emphasis on pathology of the breast.

or infant, and little practical information on the "how to's" of breastfeeding. This held true whether in the didactic or clinical portions of the courses, in fact, it was discovered that many of the instructors were not well versed in breastfeeding themselves, making it impossible for them to provide help to their students and clients, even though they were supportive of breastfeeding in general.

Having established the need for a curricular revision, the next step was to present the breastfeeding curriculum and the proposed revisions to the administration of the School of Nursing. With their support, a plenary meeting of all the school's faculty and personnel was then held to demonstrate how the units of the module would be integrated into a number of courses throughout the nursing program so as to avoid overburdening any one course or faculty member and to ensure that all the students would immediately begin receiving the information that had been lacking in the past.

The three courses that were reviewed and found lacking in adequate breastfeeding information were chosen to use portions of the module. Among the three courses, thirty hours of didactic instruction were presented, ten of which were actually prepared by students in group assignments and presented to the rest of the class, and the remaining twenty were presented by instructors who had received additional education and training in breastfeeding. A total of 114 students were trained in breastfeeding.

Following the theoretical phase, the students designed their practical clinical experience to build on the classroom work. They worked in settings as described earlier and with prenatal, natal, and postnatal mothers. To achieve the training objectives, each student selected five mothers in the outpatient clinics and/or patient wards to receive orientation and education about breastfeeding. In the immediate postpartum period, 575 mothers received these special sessions. It was hoped that the students would be able to do home follow-up with at least some of their clients, but financial, time, and other constraints made this impossible.

Faculty members were particularly interested in the Lactational Amenorrhea Method of family planning. Additional materials and training were provided to them to facilitate their utilization of this unit of the module with students, faculty from other nursing schools, and service providers.

There were a number of **unanticipated results** of the curricular revision as well. First, it was recognized that it would be important to measure the impact of the educational activities implemented in the immediate postpartum period on exclusive breastfeeding practices, so as to have some way to evaluate the students' work. A study was designed, but before it could be carried out a strike was called by health care workers in the public sector, necessitating the study's postponement for quite some time.

In addition, a special seminar was held for the Ministry of Health in conjunction with the National Nursing College of Peru, which is responsible for providing continuing education for nurses in Lima, to present their program of curricular revision as well as information on breastfeeding for child survival and child spacing. Ms. Ahumada also feels that there was a large spillover effect on the staff nurses in the clinical practice areas, she believes that as many as fifty such nurses significantly increased their knowledge of breastfeeding just by working side-by-side with the nursing students.

- Factors that **facilitated** the utilization of the curriculum included
- the active support of the nursing school administration
 - the availability and collaboration of other faculty members in the MCH program, particularly several who had received training in breastfeeding at Wellstart

- the interest in breastfeeding in Peru and other Latin American countries that has led to numerous breastfeeding studies being done there, these were then used during the courses to increase the relevance of the issue for the students

Despite the success of the curricular change, there were also **obstacles** to be overcome along the way. These included

- a lack of information and materials to fully develop the content of some of the units, whether for use with the students or directly with the mothers
- the lack of breastfeeding knowledge among the service personnel with whom the students worked

This testing effort has also been a team-building experience. To effectively test the module Ms Ahumada de Meneses called upon faculty and colleague graduates of the Wellstart Program in San Diego and other Lima-based breastfeeding specialists. One of the results of their working together has been the creation of an informal local network recognized for their breastfeeding expertise.

CASE STUDY 5

Country	Lima, Peru
Institution	Hospital de Apoyo Maria Auxiliadora (Maria Auxiliadora National Referral Hospital, Ministry of Health)
Collaborator	Rosa Saona de Flores
Type of Program	In-service

Units of Module Used

- Biological and Psychosocial Aspects of BF
- Anatomy of the Breast and Physiology of Lactation
- Nutrition of the Mother and Child during BF
- Lactation and Birth Spacing the Lactational Amenorrhea and Other Methods
- Clinical Skills for the Initiation and Management of BF
- Interventions Effect Change in Health Care Delivery Systems
- History of Breastfeeding
- Sociocultural, Technological, and Political Factors that Influence BF Practices
- Current Status of Maternal and Child Health in the Country and Risk Factors for MCH
- Lactation Management Mothers Who Work Outside the Home and Other Special Circumstances
- Communication and Counseling Techniques for BF Education at the Family Level
- Evaluation of BF Promotion Activities

Since 1982, Peru has enacted a series of laws to protect the practice of breastfeeding. The first of these laws outlines the responsibility of the Ministry of Health to educate mothers and the public about breastfeeding and to adopt service delivery practices, such as rooming-in and initiation of breastfeeding immediately after birth, that will facilitate breastfeeding. They are also responsible for the role played by health professionals in breastfeeding promotion. This legislation was followed by additional laws that mandate nurseries in the workplace and forty-five days of maternal leave following the birth of a child. Unfortunately, the public's knowledge of these laws is minimal and enforcement of them is not frequent. There is an urgent need for education of both the public and health professionals.

The Referral Hospital Maria Auxiliadora, while not directly affiliated with any of the nursing schools in Lima, has developed an active in-service education program that reaches the nurses throughout its catchment area, the southern cone of the city. Ms Saona, as the breastfeeding coordinator for the hospital, was able to design an in-service course utilizing the majority of the units of the module (see list above) as the basis for instruction. The course was to be offered three times for six to ten days each time. The first course was limited to nurses and physicians from the Hospital Maria Auxiliadora, and the second was planned for physicians, nurses, nutritionists, and social workers from the health posts under the hospital's supervision. The third and final course was to be for the staff at the MCH centers and eight small birthing hospitals in the slum areas around the hospital.

In fact, however the course was offered only once due to financial difficulties. The course was planned to accommodate approximately forty individuals, the demand was much greater, however, and enrollment was increased to sixty-five (of which fifty-five attended regularly and completed the course) and opened to nurses from outside Maria Auxiliadora. As a result the funds provided for the testing of the module proved to be inadequate to cover the costs of more than one course because of increased expenses, high inflation, and limited contribution on the part of the hospital.

The limited support on the part of the hospital administration was also exhibited in the absence of physician attendance at the course. The only doctors present were those that were invited to present sessions, the medical staff in Neonatology and Pediatrics neither attended the course nor actively supported changes in breastfeeding policies in their departments.

Nevertheless, the nurses, nutritionists, and midwives in attendance did return to their work sites and implement change. For example, the staff from Hospital Rosalia Lavalle de Morales Macedo were able to reduce the observation time of newborns from eight hours to three, followed by rooming-in. They also changed the standard orders for newborns from formula to breastfeeding. Since the hospital also serves as a clinical practice site for a major medical school, these activities interested the students and the professor of Obstetrics, so that material on breastfeeding was incorporated into the medical school course materials.

Ms Saona was able to share the curriculum with the Resident Coordinator of Obstetrics and Gynecology at the hospital and the chairman of the Department of Obstetrics at the medical school at the University of San Marcos (Universidad Mayor de San Marcos), both of whom were very interested in the curriculum for incorporation into their classes.

Other **difficulties** encountered during the implementation of the module included

- a shortage of educational and audiovisual materials, both for distribution to participants and for use during the course
- inadequate time for clinical practice and community activities
- a lack of time and funds for coordinating activities with the local nursing schools
- too large a group to work with effectively
- the course was extra work for the breastfeeding coordinator for which she was not compensated

Factors that **facilitated** that utilization of the module included

- a high level of motivation among the participants
- availability of health professionals knowledgeable about breastfeeding for presentation of sessions
- support from the Health Education Department in the Hospital Maria Auxiliadora
- photocopying and mimeograph services were readily available

To test the entire module in the hospital, Ms Saona effectively sought the collaboration of the Schools of Nursing, the Medical School, the Ministry of Health, and outside experts. In this manner, she was able to overcome the limited resources and support of her own institution to conduct an effective in-service training course. The course generated so much interest and was so effective that many requests were received for future courses.

APPENDIX 1
Curriculum Development Seminar Participants

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APPENDIX 2

Technical Reviewers

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- Dr Miriam Lobbok
- Ms Ronnie Lovich
- Dr John T Queenan

The U S Agency for International Development

- Ms Carol Dabbs
- Dr James Shelton

The Pan American Health Organization

- Ms Carol Collado
- Ms Nelly Farfan
- Ms Maricel Manfredi
- Dr Jose Antonio Solis
- Dr Elbio Nestor Suarez Ojeda

Los Angeles Regional Family Planning Council

- Dr Gloria Mejia
- Ms Karen Beck Wade

Wellstart

- Dr Audrey Naylor
- Ms Ruth Wester

International Baby Food Action Network (IBFAN)

- Ms Helen Armstrong

Siriraj Hospital, Bangkok, Thailand

- Dr Wirapong Chatranon

World Health Organization Office for Europe

- Dr Elisabet Helsing

Karolinska Institute, Stockholm, Sweden

- Ms Anna-Berit Ransjo-Arvidson

APPENDIX 3

Data Collection Guidelines

Source Rodriguez Garcia, R Schaefer L & Yunes J (Eds) (1990) Lactation education for health professionals Washington DC Pan American Health Organization/WHO p 99 106

Guidelines for Implementing the Module

The following form has been developed as a tool to be used by health-care professionals and faculty to monitor the planning and implementation of the module. The primary purposes of these guidelines are to

- identify those aspects of the academic or clinical situation that intervene in the implementation of the module and
- identify the achievements, facilitating factors and obstacles that play a role in the implementation process and how the obstacles have been overcome

I General information

1 Name of institution

2 Name of director or dean

3 Name of the person in charge of the maternal-child health (MCH) program or services

4 Type of institution

Private _____

Public _____

5 In what month does the academic year begin?

6 How long is the academic year? _____

7 How many times is in-service training organized per year? _____

8 How long is in-service training? _____

II Academic information

1 Length of nursing program

3 years _____ 4 years _____

2 Within the curriculum is there a course that deals specifically with maternal-child health (MCH)?

Yes _____ No _____

3 Prior to using the lactation module the nursing/medical/ other curricula had specific objectives and content for the teaching of breastfeeding that were

sufficient _____ insufficient _____

4 The use of the lactation module has produced changes in the following areas of breastfeeding teaching

1 Emphasis of breastfeeding focus _____

2 Objectives _____

3 Content _____

- 4 Skills taught _____
 - 5 Attitudes taught _____
 - 6 Number of hours _____
 - 7 Teaching methodologies _____
 - 8 Didactic materials used _____
 - 9 Clinical activities _____
 - 10 Evaluation criteria _____
 - 11 Other (Specify) _____
-

III Information on the integration of the breastfeeding module

- 1 The module has permitted the following activities to be accomplished
 - a changes in the teaching/learning process in the undergraduate program _____
 - b changes in the teaching/learning process in the graduate program _____
 - c organization of continuing education sessions/courses _____
 - d changes in the organization and practices of hospital nursing services _____

- e collaboration of faculty and service personnel _____
- f interdisciplinary activities with
- physicians _____
 - nutritionists _____
 - others (specify) _____
-
- g informal education activities with mothers and/or community groups _____
- h educational sessions with faculty and/or service personnel _____
- i development of research projects
(topic _____)

2 Of the units that constitute the module to what extent has each been integrated into the curriculum?

C=Completely P=Partially N=Not at all

- | | | | | |
|---|---|---|---|---|
| a | History of Breastfeeding Practices | C | P | N |
| b | Sociocultural Technological and Political Factors That Influence Breastfeeding Practices | C | P | N |
| c | Current Status of Maternal and Child Health (MCH) in the Country and Risk Factors for MCH | C | P | N |

d	Biological and Psychosocial Aspects of Breastfeeding	C	P	N
e	Anatomy of the Breast and the Physiology of Lactation	C	P	N
f	Nutrition of the Mother and Child During Lactation	C	P	N
g	Lactation and Sexuality	C	P	N
h	Lactation and Birth Spacing The Lactational Amenorrhea and Other Methods	C	P	N
i	Clinical Skills for the Initiation and Management of Lactation	C	P	N
j	Lactation Management Mothers Who Work Outside the Home and Other Special Circumstances	C	P	N
k	Communication and Teaching Skills for Health and Other Professionals	C	P	N
l	Communication and Counseling Techniques for Breastfeeding Education at the Family Level	C	P	N
m	Interventions to Effect Change in Health-Care Service Delivery Systems	C	P	N
n	Breastfeeding Promotion at the Community and Societal Levels	C	P	N
o	Evaluation of Breastfeeding Promotion Activities	C	P	N

IV The process of integrating the module achievements, facilitating factors, and difficulties

Steps	Achievements	Facilitating factors	Difficulties
1 Presentation of the module to the academic heads of the institution for their information motivation and decision making			
2 Study of the module by the curriculum or program committee or the MCH department to identify the academic implications of the module's implementation			
3 Information motivation and/or training in the philosophy and structure of the module for other faculty members and educators			
4 Integration of the module or portions of the module into one or more programs or areas of study in the curriculum			
5 Selection information and motivation of the other professionals (anthropologists sociologists physicians nutritionists psychologists and others) who will collaborate in the development of module content regarding the philosophy and structure of the complete module to ensure that its cohesiveness will be maintained			
6 Identification and selection of a bibliography appropriate to the needs of the module			

IV The process of integrating the module achievements, facilitating factors, and difficulties
(Cont)

Steps	Achievements	Facilitating factors	Difficulties
7 Selection and development of collaborative ties with the sites for hospital and community practice			
8 Coordination with the service personnel involved in the clinical activities including information motivation and training			
9 Promotion of interdisciplinary activities in the service areas			
10 Identification and/or development of teaching materials appropriate to the needs of the module			
11 Review selection and/or elaboration of the didactic materials that are needed for each unit			
12 Development of observation/interview guides and/or checklists for the clinical activities in the module			
13 Development of questions/criteria that allow the objective evaluation of the level of learning achieved at the end of each unit			

**IV The process of integrating the module achievements, facilitating factors, and difficulties
(Cont)**

Steps	Achievements	Facilitating factors	Difficulties
14 Review of nursing research literature and of breastfeeding research in other disciplines that document module content			
15 Summary of the conclusions reached in the small group work included in the module's teaching methodologies			
16 Identification of and coordination with institutions that promote breastfeeding (La Leche League IBFAN others)			
17 Development of educational materials for use in the community			
18 Identification of topics for research			

COMMENTS

SIGNATURE

DATE

APPENDIX 4

Case Study Report Outline

Project Lactation Education for Health Professionals

Testing of the Breastfeeding Curriculum
Process and Results

(It is anticipated that the report will be approximately fifteen, typed, double-spaced pages)

- I Background (approximately two pages)
 - A Brief description of breastfeeding practices and policies (or lack of policies) in the country or institution where the module was tested, prior to its testing
 - B Justification of the need for breastfeeding education for health professionals (a brief description of the school's curriculum, or of the site's in-service program, including the amount of time dedicated to breastfeeding)
- II Plan of Action (approximately four pages, two for D)
 - A Brief description of the type of institution where the testing took place
 - B Goals of the testing
 - C Description of the testing plan (which units of the module were chosen and why, how the content of these units was developed, other materials that were developed or identified, reasons why this plan was chosen, etc)
 - D Brief description of the implementation process and the activities carried out (preparatory steps, implementation process, modifications made to the plan, evaluation and follow-up)
- III Results of the Implementation (approximately two pages)
 - A Anticipated results
 - B Unanticipated results
- IV Analysis of the Implementation Process (approximately two pages)
 - A Facilitating factors
 - B Obstacles/barriers
 - C Other possible plans in light of "A" and "B"

APPENDIX 4 - CONTINUED

- V Conclusions (approximately four pages)
- A Lessons learned
 - B Recommendation for additional development of the module
 - C According to the testing site
 - describe the steps that will be taken to ensure the official integration of the module into the university's curriculum, or
 - describe the steps that will be taken to continue breastfeeding education in your institution
- VI Appendices
- A List of resource materials used in the testing
 - B Copies of materials developed for the testing
 - C Collection guidelines filled out

APPENDIX 5

Testing Sites, Institutions, and Collaborators

COMPLETED TESTING

CASE STUDY 1

Country Santiago de Chile, Chile

Institution Facultad de Enfermería, Pontificia Universidad Católica de Chile (School of Nursing, Catholic University of Chile)

Collaborators Lilia Vidal, Marisol Cantwell, Maria Cartagena

CASE STUDY 2

Country Santa Fe de Bogota, Colombia

Institution Facultad de Enfermería, Pontificia Universidad Javeriana (School of Nursing, Javeriana University)

Collaborators Maria Teresa de Vergara, Edy Salazar

CASE STUDY 3

Country Santiago de Cali, Colombia

Institution Departamento de Enfermería, Universidad del Valle (School of Nursing, University of El Valle)

Collaborator Marlene Montes de Triana

CASE STUDY 4

Country Lima, Peru

Institution Escuela Nacional de Enfermería Arzobispo Loayza, Universidad Peruana Cayetano Heredia (School of Nursing, Archbishop Loayza, Cayetano Heredia University)

Collaborator Maria Elizabeth Ahumada de Meneses

CASE STUDY 5

Country Lima, Peru

Institution Hospital de Apoyo Maria Auxiliadora (Maria Auxiliadora National Referral Hospital, Ministry of Health)

Collaborator Rosa Saona de Flores

INITIATED TESTING

Country San Jose, Costa Rica

Institution Caja Costarricense del Seguro Social (Social Security Office)

Collaborators Ana Cecilia Carvajal Jimenez, Marlene Calvo Solano

Country Quito, Ecuador

Institutions Departamento de Enfermeria, Ministerio de Salud Publica (Department of Nursing, Ministry of Public Health)

Facultad de Enfermeria, Pontificia Universidad Catolica de Ecuador (School of Nursing, Catholic University of Ecuador)

Collaborators Nelly Gallardo, Nila Vallejo

Country Tegucigalpa, Honduras

Institutions Hospital Escuela de Enfermeria, Tegucigalpa (Hospital School of Nursing)

Instituto Hondureño del Seguro Social (Social Security Institute)

Facultad de Enfermeria, Universidad Autonoma de Honduras (School of Nursing, Autonomous University of Honduras)

Collaborators Noblida Almendares de Velasquez, Felicita Benitez de Velasquez, Esther Rios de Viera

Country Mexico, D F , Mexico

Institutions Departamento de Gineco-Obstetricia, Mexico Hospital General (Department of Obstetrics and Gynecology, General Hospital of Mexico)

Collaborators Guadalupe Martinez Campo

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