BREAST-FEEDING POLICIES AND PRACTICES AMONG OKLAHOMA HOSPITALS

By

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CHAPTER I

INTRODUCTION

The American Dietetic Association advocates breast-feeding because of the nutritional and immunologic benefits of human milk and the physiological, social, and hygienic benefits of the breast-feeding process for the mother and infant (1). The American Academy of Pediatrics, the American College of Obstetricians and Gynecologists, the American Nurses Association, the World Health Organization, the U.S. Department of Agriculture, the American Public Health Association, and the Surgeon General join in support of breast-feeding for promoting health/preventing disease (2-6).

Breast-feeding is unequaled in its opportunities to provide nourishment for the health, growth, and development of infants. It also enhances the development of strong emotional bonds between infants and their mothers. While the importance of breast-feeding gains recognition (7-12) among providers of medical care, it has become apparent that the incidence of breast-feeding continues to decline (13-15). Examining current hospital policies and practices concerning breast-feeding promotion and disseminating this information to health care givers may facilitate progress toward the national breast-feeding objectives. The goal to improve infant health requires cooperation of state and local governments as well as the private sector.

Purpose and Objectives

The purpose of this study was to determine the variations and the associations among Oklahoma hospitals' policies and practices concerning breast-feeding promotion. Specific objectives for this study were:

1. To determine current breast-feeding policies and practices among Oklahoma hospitals.

2. To determine if differences exist between Oklahoma hospital breast-feeding policies and practices based on size and type (teaching or nonteaching) of institution.

3. To determine if differences exist between hospital breast-feeding policies and practices based on the employment of a Lactation Consultant/Certified Breast-feeding Educator.

4. To determine if differences exist between hospitals' breast-feeding policies and practices based on educational programs provided for hospital staff members.

Hypotheses

For this study, the following hypotheses were postulated:

H_1: There will be no association between breast-feeding policies (questions 30-32 in survey) and practices (questions 16-29 in survey) of Oklahoma hospitals based on size of institutions (determined by the researcher to be small < 60 beds, medium 61-199 beds, and large > 200 beds).

H_2: There will be no association between breast-feeding policies and practices between teaching versus nonteaching Oklahoma hospitals.

H_3: There will be no association between breast-feeding policies and practices of Oklahoma hospitals based on the employment of a

Lactation Consultant/Certified Breast-feeding Educator.

H_4: There will be no association between breast-feeding policies and practices of Oklahoma hospitals based on whether educational programs on breast-feeding are provided for hospital staff members.

Limitations

The following limitations were recognized for this study:

1. The healthcare institutions surveyed did not constitute a random sample representing the defined population, therefore limiting the generalization of the data.

2. Data were obtained from the healthcare institutions through self-report which is limited by the designated respondent's ability and willingness to provide the information requested.

Definition of Terms

The following terms were identified for this study:

Bottle-feeding - "method of infant feeding in which formula serves as the sole or predominant source of milk" (16).

Breast-feeding - "method of infant feeding in which breast milk serves as the sole or predominant source of milk" (16).

Certified Breast-feeding Educator - health care providers (e.g., nurses and dietitians) who are certified by community instructors or organizations.

Lactation Consultant - clinical specialists (e.g., nurses and dietitians) who are certified by the International Board of Lactation Consultant Examiners.

Nonteaching Hospital - responding facilities indicating "no" on question one of the survey (Appendix A).

Teaching Hospital - responding facilities indicating "yes" on question one of the survey (Appendix A).

CHAPTER II

REVIEW OF LITERATURE

The health and psychological benefits of breast-feeding for both mother and infant are widely recognized and have been extensively documented in the scientific and popular literature. These benefits include:

> Superior nutritional composition of breastmilk
> Immunological properties: prevention of a variety of digestive and other diseases and allergic reactions
> Psychological benefits in terms of enhanced mother-child bonding, and potential for subsequent improved parenting
> Ease and convenience of breast-feeding versus preparation of bottles and formula
> Possible better control of caloric intake by the infant
> More rapid uterine involution
> Possible monetary benefits from lower food costs for the infant
> Use of stored fat as an energy source during lactation, leading to more rapid postpartum weight loss (17).

Trends in Breast-feeding

In spite of the acknowledged benefits, the number of mothers who breast-feed has declined in the last half of this century. Although a resurgence of interest began in the 1970s and support groups were developed (18), many women still choose not to breast-feed.

In 1971, the incidence of breast-feeding in hospitals declined to its lowest level - 25 percent (18). By 1984, breast-feeding had increased to 60 percent, a 35 percent increase in 13 years (1). The number of mothers who breast-fed three months or longer increased from 9 percent in 1971 to 38 percent in 1983 (19).

The incidence of breast-feeding varies according to socio-demographic factors (19). For example, in 1984, one-third of black infants were breast-fed for three months or more (1). In 1980, 40 percent of the women participating in the Supplemental Food Program for Women, Infants, and Children (WIC) breast-fed (20).

Women least likely to breast-feed are young (under 20 years of age), grade school educated, lower income, and black (1, 20). Encouraging breast-feeding in these groups requires an understanding of their concerns about the breast-feeding process, which may be based on inaccurate and/or inadequate information. Programs are needed to identify the special concerns and needs of these groups and to provide specific education and on-going support for those identified as least likely to try or to succeed at breast-feeding (1). Pre-pregnancy and early pregnancy are crucial times for intervention concerning methods of infant feeding, as the majority of women have chosen a method by the end of the second trimester of pregnancy (21).

The Oklahoma State Department of Health (OSDH) breast-feeding statistics indicate that 49.7 percent of Oklahoma mothers breast-feed after discharge from the hospital following delivery compared to 54 percent nationally. The following recommendations were made to assist in achieving the Healthy People 2000 objectives for increased levels of breast-feeding in Oklahoma:

> Develop and distribute media messages for the general public regarding the benefits of breast-feeding.
> Encourage health care professionals to promote and support breast-feeding.
> Advocate for policies in the workplace to facilitate breast-feeding and on-site child care.
> Support and seek funding for program initiatives and projects designed to demonstrate techniques to increase breast-feeding.

Develop institutional and agency policies that endorse breast-feeding as the preferred method of infant feeding, especially for providers serving women who are least likely to breast-feed.
Solicit support from the media in portraying breast-feeding as the norm in American society (22).

Importance of Breast-feeding Promotion and Education

One of the health promotion/disease prevention objectives for the nation, composed by the U.S. Department of Health and Human Services for review, is that by the year 2000 the proportion of women who breast-feed their babies should be increased to 75 percent at hospital discharge and 50 percent at six months of age (5). In 1978, when this objective was chosen, the proportion was 45 percent at hospital discharge and 21 percent at 6 months of age. Historically, the federal government has not been idle in the promotion of breast-feeding. During the years 1946-1947, Dr. Katherine Bain of the Children's Bureau conducted the first nationwide survey on the incidence of breast-feeding in hospitals in the United States. This report was published in Pediatrics in September, 1948 (2). A Public Health Service (PHS) study indicates that many states are fitting the National Health Objectives into their health promotion and disease prevention initiatives (23).

Examination of attempts to promote breast-feeding demonstrates that enlightened medical practice can substantially increase the prevalence and length of successful lactation. The common perception that trends away from breast-feeding are an inevitable part of "modernization" and are difficult to reverse does not seem to be accurate. In fact, there appears to be a series of specific, manageable steps that can increase markedly the incidence and duration of

breast-feeding, and, as a bonus, they are not costly to implement. It seems that there are no special secrets to promotion of breast-feeding; what a rational person would think might work does, in fact, work. Table I summarizes the effects of selected intervention program effects on incidence and duration of breast-feeding (24).

The first opportunity to breast-feed typically occurs in the hospital. Education and support from the nursing staff, as well as hospital routines designed to encourage breast-feeding can have a positive effect on the mother's breast-feeding experiences (25, 26).

The medical profession must assume part of the responsibility for the decline in breast-feeding before the 1970s. Medical school curricula have offered little or no time to the physiology and advantages of breast-feeding. The result is a generation of health professionals who are neither convinced of the superiority of breast-feeding nor knowledgeable enough on the subject to be supportive of mothers who would like to breast-feed (27).

In 1978, the American Academy of Pediatrics (AAP) recommended that all physicians encourage mothers to breast-feed their infants. The AAP voiced its support for the promotion of breast-feeding. The final recommendations included the following:

> Public education through television, newspapers, magazines, and radio to enhance the acceptability of breast-feeding.
> Improved education techniques in medical and nursing schools and residency programs in obstetrics, pediatrics, and family practice.
> Factual educational material designed to present advantages of breast-feeding.
> Breast-feeding information provided in prenatal classes and at any prenatal contact.
> Extended contact between mothers and infant in the first 24 hours.
> Rooming-in encouraged except when specifically contra-indicated.

TABLE I

SUMMARY OF SELECTED INTERVENTION PROGRAM EFFECTS ON INCIDENCE AND DURATION OF BREAST-FEEDING

Type of Intervention	Time of Measurement	Percent Breastfeeding Duration of Breastfeeding Before Intervention (or in control group)	Percent Breastfeeding Duration of Breastfeeding After Intervention (or in control group)
Hospital-based education program	Hospital Discharge	54.7%	69.4%
Education of health professionals	Hospital Discharge	45%	64%
Education by doctors and nurses	Initiation	43.6%	68.5%
Hospital programs to promote breastfeeding	Hospital Discharge	18%	34.8%
Obstetric counseling and group support	Hospital Discharge	33%-15%	65%-52%
Mass media education	1, 2, 4, and 6 month postpartum	29.5%, 23.1%, 6%, 1.0%	78.8%, 69%, 39.4%, 15.4%
Education of hospital staff	Hospital Discharge	37%	44%
Daily expression of collostrum	Not given	56%	83%
Rooming-in (A)	Hospital Discharge	76%	93%
Rooming-in, no supplementary food	Not given	26.4%	87.3%
Skin-to-skin contact and immediate suckling after birth (A)	3 months postpartum	26%	58%
No routine weighings and no supplementary food	Duration	42 days	95 days
Skin-to-skin contact and immediate suckling after birth (B)	Duration	108 days	175 days
Rooming-in (B)	Duration	1.77 month	3.14 months
Immediate suckling after birth (A)	2 months postpartum	16.6%	100%
Immediate suckling after birth (B)	6 and 12 months postpartum	16.7%, 0.0%	52.9%, 29.4%

TABLE I (Continued)

Type of Intervention	Time of Measurement	Percent Breastfeeding Duration of Breastfeeding Before Intervention (or in control group)	Percent Breastfeeding Duration of Breastfeeding After Intervention (or in control group)
Early initiation and increased frequency of breastfeeding	Duration	77 days	182 days
Immediate suckling and rooming-in	2 months postpartum	27%	77%
Education and changes in hospital routines	Intention to breast feed 1 month postpartum	36%	59%
Education of nursing staff and demand feeding and rooming-in	Hospital Discharge	21.8%, 67.0%	27.7%, 81%
Support of breastfeeding by hospital staff and no supplementary feeding	Initiation	47%	72%

Note: From "The Obstetrician's Opportunity: Translating 'Breast is Best' from Theory to Practice" by B. Winikoff and E. C. Baer, 1980, The American Journal of Obstetics and Gynecology, 105.

Discharge packs of formula given only at the discretion of the physician or at the request of the mothers, not a routine hospital practice.
Utilization of support groups such as La Leche League (28).

Support Systems for Breast-feeding

La Leche League International is a mother-to-mother breast-feeding support group that fosters breast-feeding through information, reassurance, and personal warmth. In addition to their book The Womanly Art of Breast-feeding, they publish numerous information sheets and booklets for the lay public (29).

A new allied health worker has recently emerged to work alongside other childbirth educators. This new figure is a lactation consultant (LC), focusing efforts on providing assistance specifically to the woman who wishes to breast-feed her baby. The typical LC has years of experience supporting mother-baby pairs. An independent corporate body called the International Board of Lactation Consultant Examiners oversees the administration of a certification examination to LCs that evaluates the cognitive skills related to lactation consulting and 10 developmental infant age-related stages. Understanding is required of basic medical and behavioral issues as well as legal-ethical matters. Studies of the impact of LCs on breast-feeding success suggest that incidence and duration of breast-feeding are positively affected (30).

The concept of a support system can be very broadly defined. It may consist of supportive family members (especially the father), relatives, and friends who advise and encourage the new mother to nurse her baby. It may be another breast-feeding mother who gives the needed advice and encouragement to overcome obstacles during the difficult first weeks. It may also be a health professional who visits

the new mother periodically in her home and/or maintains telephone contact with her to give advice and encouragement and to resolve problems before they become causes for weaning. Health professionals may also provide important support through their counseling and education contacts with the new mother, both in clinic and hospital settings (17).

The presence or absence of a support system for breast-feeding women can often be the single most important determinant of the success of a promotion effort. Education alone may allow the most highly motivated mothers to nurse successfully. The vast majority of mothers need some level of support from others who are significant in their lives, as well as from those who are knowledgeable and concerned about their efforts to breast-feed. Health professionals can play a key role in developing and implementing such a support system. In so doing, they will likely increase both the number of women beginning to breast-feed and the length of time they are able to sustain it (17).

Model Practices/Policies for Hospitals

The most critical period in the establishment of lactation is the first 7 to 10 days. The importance of the hospital period in starting and maintaining successful lactation has been strongly recognized by the American Academy of Pediatrics and other professional associations (31). It has been noted that the routine in many hospitals makes breast-feeding difficult, and that changes may need to be made in obstetrical ward and neonatal unit practices to increase the opportunity for successful lactation. The basic elements of a successful breast-feeding program have been identified as the following:

1. A well-defined program that is an integral part of the comprehensive maternity program.

2. Acceptance of the program by all hospital personnel.

3. Knowledge of breast-feeding techniques and counseling by all hospital personnel (32).

Many breast-feeding promotion programs have been undertaken over the past several years. Most of these have been initiated at the hospital level and have involved interventions that offer information, support, or changes in hospital routines, in an attempt to increase the frequency and/or duration of breast-feeding (24, 33-40). Many have shown increases in the rates of breast-feeding.

Common obstacles to the successful initiation of breast-feeding in the hospital include lack of early mother-baby contact, the offering of water and formula to the breast-fed newborn, restrictive feeding schedules, lack of support for overcoming breast-feeding problems such as engorgement and sore nipples, and the provision of contradictory information by the hospital staff (38). Another striking finding is that information and education programs aimed at hospital staff are often as effective in increasing breast-feeding rates as direct education of new parents (41, 42). Just as combining information and support enhances breast-feeding more than either alone, combining both with sensible hospital routines should act as an even more powerful promotion of breast-feeding success.

Medical interventions which have proved effective in promoting breast-feeding can be divided into two categories: those that supply information and support and those that change hospital routines so as to facilitate the successful establishment of lactation. In many cases,

successful programs to increase breast-feeding have involved both types of actions, which seem to have the potential for interacting synergistically. Indeed, increased information on the importance of breast-feeding may influence hospital staff to change hospital routines because the staff itself has become more supportive of breast-feeding. Such positive staff attitudes also may be translated into direct support of patient decisions to breast-feed even without a formal patient education program (24).

The following policies are part of a check-list intended to be a suggestive rather than exhaustive inventory of the kinds of practical steps that can be taken within maternity services to promote and support breast-feeding. Under ideal circumstances, the answer to all of the questions in the policy check-list will be "yes." A negative reply may indicate an inappropriate practice or routine that should be modified in accordance with the WHO/UNICEF statement (43).

1. Does the health care facility have an explicit policy for protecting, promoting and supporting breast-feeding?

2. Is this policy communicated to those responsible for managing and providing maternity services (for example in oral briefings when new staff are employed; in manuals, guidelines and other written materials; or by supervisory personnel)?

3. Is there a mechanism for evaluating the effectiveness of the breast-feeding policy? For example: Are data collected on the prevalence of breast-feeding initiation and breast-feeding at the time of discharge of mothers and their infants from the health care facility? Is there a system for assessing related health care practices and training and promotional materials including those commonly used by antenatal and postnatal services?

4. Are the cooperation and support of all interested parties, particularly health care providers, breast-feeding counsellors and mothers' support groups, but also the general public, sought in developing and implementing the health care facility's breast-feeding policy (43)?

Summary

As breast-feeding continues to increase in prevalence, and while traditional support systems for new mothers remain generally unavailable, health professionals will be expected to provide appropriate guidance throughout the full course of lactation. Increased access to prenatal information, re-examination of intrapartum hospital practices, and restructuring of infant health maintenance visits will be required in most clinical settings if optimal infant feeding recommendations are to be put into widespread practice. Societal and cultural changes that encourage exposure to breast-feeding in the media, close maternal-infant contact throughout the nursing period, and more realistic demands made on new mothers will be necessary to permit natural infant feeding and mothering. Despite the effort involved, numerous health professionals have recognized that the successful management of breast-feeding can be one of the most rewarding aspects of the care of infants and mothers (39).

CHAPTER III

METHODS AND PROCEDURES

To determine variations and associations among Oklahoma hospitals' policies and practices concerning breast-feeding promotion may be important to help reduce barriers that interfere with successful breast-feeding. This study was designed to test four hypotheses which were developed to determine if differences exist among Oklahoma hospital breast-feeding policies and practices based on the size and type of the institution, on the hospitals' employment of a Certified Breastfeeding Educator (CBE)/Lactation Consultant, and on educational programs provided for hospital staff members.

Research Design

The status survey was the research design used in this study. The purpose in status survey research is to describe, analyze, and interpret conditions that exist. It involves comparison or contrast and attempts to discover relationships between variables (44).

In this study, the dependent variables were the breast-feeding practices, questions 16-29 in the survey, and the policies, questions 30-32 (Appendix A). The independent variables included: size of hospital, teaching and nonteaching hospitals, employment of a Lactation Consultant/Certified Breast-feeding Educator, and educational programs provided for hospital staff.

Population and Sample

The population sampled consisted of 103 Oklahoma hospitals licensed for obstetrical services. Twenty-seven hospitals reported current "shut downs" of obstetrical services. Approximately 65 percent of Oklahoma hospitals (N=49) currently providing obstetrical services participated in this evaluation. Hospital sizes ranged from 12 to 889 beds. Not all hospitals responded to every question.

Data Collection

Instrumentation

In 1988, Strembel, Sass, Cole, Hartner and Fischer (45) surveyed Arizona hospitals with regard to hospital routines that favor either breast-feeding or bottle-feeding. Baseline data were collected with a two-page hospital survey developed by Arizona Health Mothers, Healthy Babies Coalition's Breast-feeding Task Force. The instrument was patterned after a questionnaire used in a similar study by Reames (46).

A questionnaire developed by the Oklahoma State Department of Health Breast-feeding Task Force was used for data collection in this study. The questionnaire was composed of four sections, each corresponding to a specific objective of the study. The first two sections contained questions about general demographic data, with the third containing questions about practices for hospitals concerning breast-feeding and the fourth containing questions about hospital policy concerning breast-feeding (Appendix A).

In 1992, the Oklahoma State Department of Health (OSDH) Breast-feeding Task Force, in cooperation with Oklahoma Healthy Mothers, Healthy Babies Coalition obtained approval from OSDH Commissioner of Health, Joan K. Leavitt, M.D., to survey Oklahoma hospitals with regard to hospital routines that favor either breast-feeding or bottle-feeding. The instrument was patterned after the questionnaire used in the Arizona study (45).

The survey was designed to collect information on infant feeding practices in Oklahoma hospitals and to examine variables that influence the initiation and duration of breast-feeding. These variables included hospital breast-feeding policies, educational programs offered for staff and mothers, and breast-feeding management procedures.

Procedure

Approval for conducting the study was obtained from the Oklahoma State Department of Health in January, 1992 (Appendix B). The questionnaire was mailed to the Director of Nursing/MCH coordinator at each hospital. The mailing included a cover letter explanation, request for participation, self-addressed stamped envelope, and request to return the survey by February 13, 1992 to Oklahoma Healthy Mothers, Healthy Babies Coalition State Coordinator, Ann Roberts (OSDH Breast-feeding Task Force member).

Oklahoma Healthy Mothers/Healthy Babies Coalition mailed the survey to 103 Oklahoma hospitals licensed for obstetrical services. Participants were invited to participate and were informed that all responses they provided on the questionnaire would remain confidential. University of Central Oklahoma student, Robin Peckham, telephoned

hospitals to follow up unanswered questionnaires. It was hoped that these findings would be useful to gain insight as to how Oklahoma can implement strategies for attaining the U.S. Surgeon General's Health Promotion/Disease Prevention objectives for the nation regarding breast-feeding. The researcher submitted an application for review of human subjects research to the Oklahoma State University Institutional Review Board to complete the study.

Analyses of the Data

The task force received responses from 49 hospitals. Twenty-seven hospitals indicated that obstetrical services were no longer provided. The author, a current OSDH Breast-feeding Task Force member gathered the subject's responses for analysis.

Analysis of each of the four hypotheses listed in Chapter I were performed using the Statistical Analysis System (SAS) (47). A frequency distribution was performed to identify patterns in questionnaire responses. Chi-square tests were then employed to determine if responses given by hospitals were significantly associated with type and size of hospitals, employment of Certified Breast-feeding Educator/Lactation Consultant, and educational programs provided for hospital staff members. A probability level of $p < 0.100$ was considered statistically significant.

CHAPTER IV

RESULTS AND DISCUSSION

The purpose of this study was to determine the variations and the associations among Oklahoma hospitals' policies and practices concerning breast-feeding promotion. The survey was designed to collect information on infant feeding practices in Oklahoma hospitals and to examine associations between selected demographic variables and breast-feeding practices and policies.

Characteristics of Oklahoma Hospitals Licensed for Obstetrics

Background Data

Healthy People 2000 set forth a national health objective to increase breast-feeding levels to 75 percent by the year 2000, with 50 percent of mothers continuing to breast-feed up to six months. In 1992, the Oklahoma Healthy Mothers, Healthy Babies Coalition and Oklahoma State Department of Health (O.S.D.H.) Breast-feeding Task Force conducted a survey of hospitals designed to determine Oklahoma's progress toward this goal, and to identify policies and procedures that support or hamper progress toward attaining this goal.

The survey patterned after a questionnaire used in previous studies, was sent to the Director of Nursing or the Maternal Child Health (M.C.H.) Coordinator of 103 hospitals licensed for obstetrical services

in Oklahoma. Forty-nine of these hospitals responded with useful data, and 27 additional hospitals reported current "shut downs" of obstetrical services due to lack of physician participation and/or cost efficiency. Thus, 65 percent of Oklahoma hospitals (N=49) currently providing obstetrical services participated in the survey.

Type of Hospital

Of the 49 hospitals participating in the survey, 12 indicated that they were teaching hospitals. Two major universities in the state have three teaching hospitals, however, other medical centers providing experience for students in medicine, medical doctors (M.D.), doctors of osteopathy (D.O.), nurses (R.N. and L.P.N.), dietitians (R.D.), and other allied medical professions consider themselves as teaching hospitals (Table II).

Obstetrics

There are 680 Oklahoma nurses who work in obstetrical (O.B.) units serving a total of 514 obstetrical beds. Small hospitals reported averages of 3.8 obstetrical nurses and 4.57 beds. Averages of 16 nurses and 11 beds were reported for medium hospitals, with large hospitals in Oklahoma having an average of 39 nurses and 22 beds in their O.B. units. Ranges for O.B. nurses and beds are as follows:

	O.B. Nurses	O.B. Beds
(1) Small Oklahoma hospitals	1-11	1-12
(2) Medium Oklahoma hospitals	14-25	4-21
(3) Large Oklahoma hospitals	17-78	5-46

TABLE II

CHARACTERISTICS OF OKLAHOMA HOSPITALS WITH OBSTETRICAL SERVICES
(N=49)

Characteristics		N
Type		
Teaching		12
Non-Teaching		37
Hospital Size		
60 or less beds		23
61-199 beds		14
Over 200 beds		12
	Range:	12-88 beds 1-46 Obstetrical beds
Beds in Obstetrical Unit	Range: Total:	1-46 514
Nurses in Obstetrical Unit	Range: Total:	1-78 680
Number of Deliveries (1990)	Range: Total:	11-4000 21,856

Hospital Size and Number of Deliveries

Hospitals' bed size varied from 12 to 889 beds. For purposes of analysis, the respondents were grouped into three categories:

(1) 60 beds or less, - small

(2) 61 to 199 beds, - medium

(3) Over 200 beds, - large

Reported deliveries for 1990 totaled 21,856 with a range in individual hospitals from 11 to 4000. Five hospitals each reported more than 1400 deliveries for the year.

Oklahoma Breast-feeding Mothers

Breast-feeding incidence in the past year was reported as percent of deliveries. Hospitals also reported percent of breastfeeding mothers at discharge (Figure 1). Over 40 percent of responding hospitals reported 26-50 percent of new mothers breast-feeding in the hospital, and at discharge from the hospital.

Breast-feeding Education

Sixty-two percent (N=28) of the responding hospitals provided 487 breast-feeding educational programs in the past year (1991) for mothers and/or families. Twenty-eight hospitals reported 1-255 breast-feeding programs in Oklahoma. Of the 49 hospitals, 21 offered no breast-feeding educational programs for mothers. Hospitals differed with respect to the availability of educational programs for staff. Of the 49 facilities, 29 had no in-service programs on breast-feeding, whereas 20 offered one to 12 programs per year (total = 42) (Figure 2).

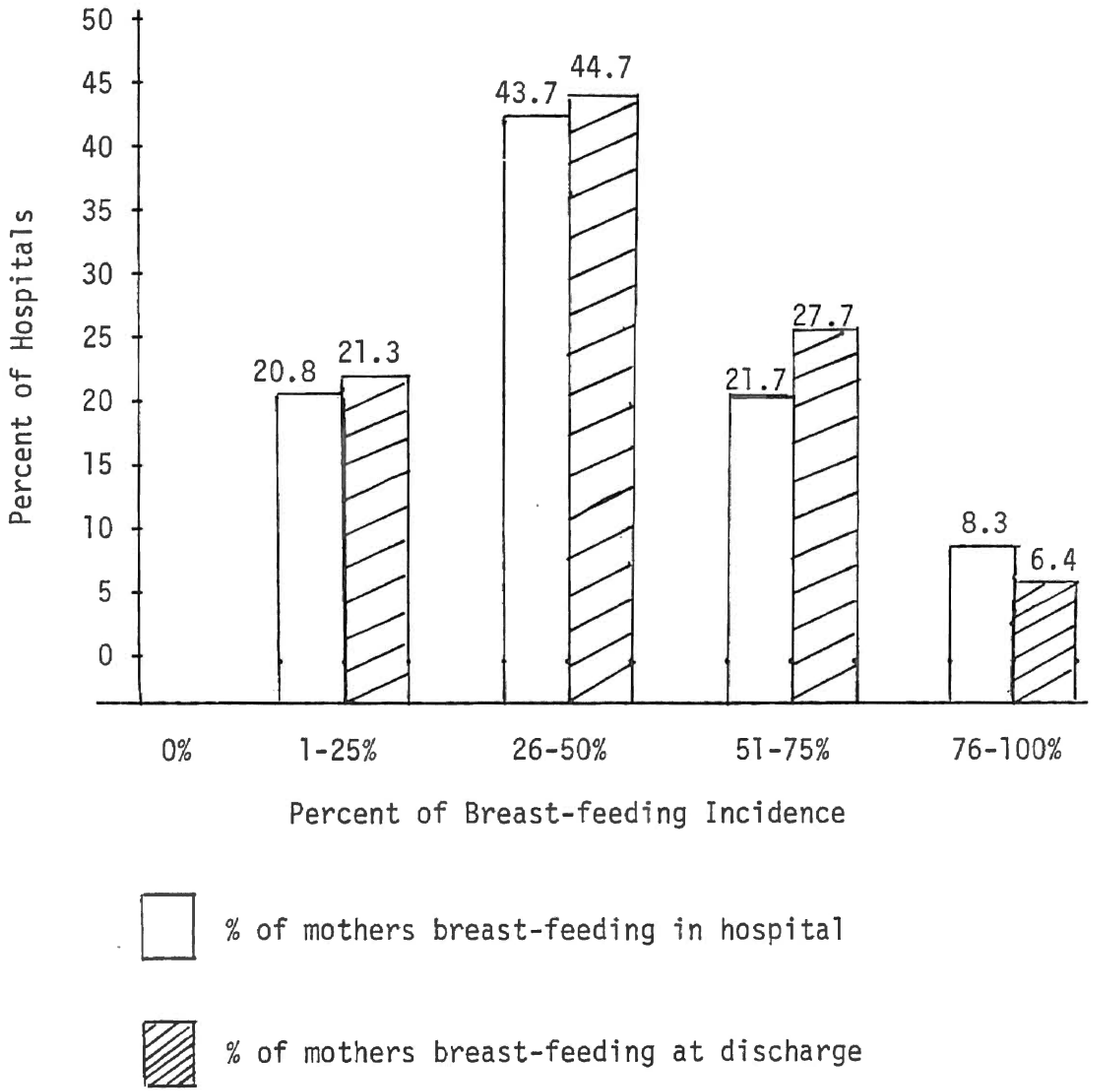

Figure 1. Breast-feeding Initiation and Duration at Hospital Discharge

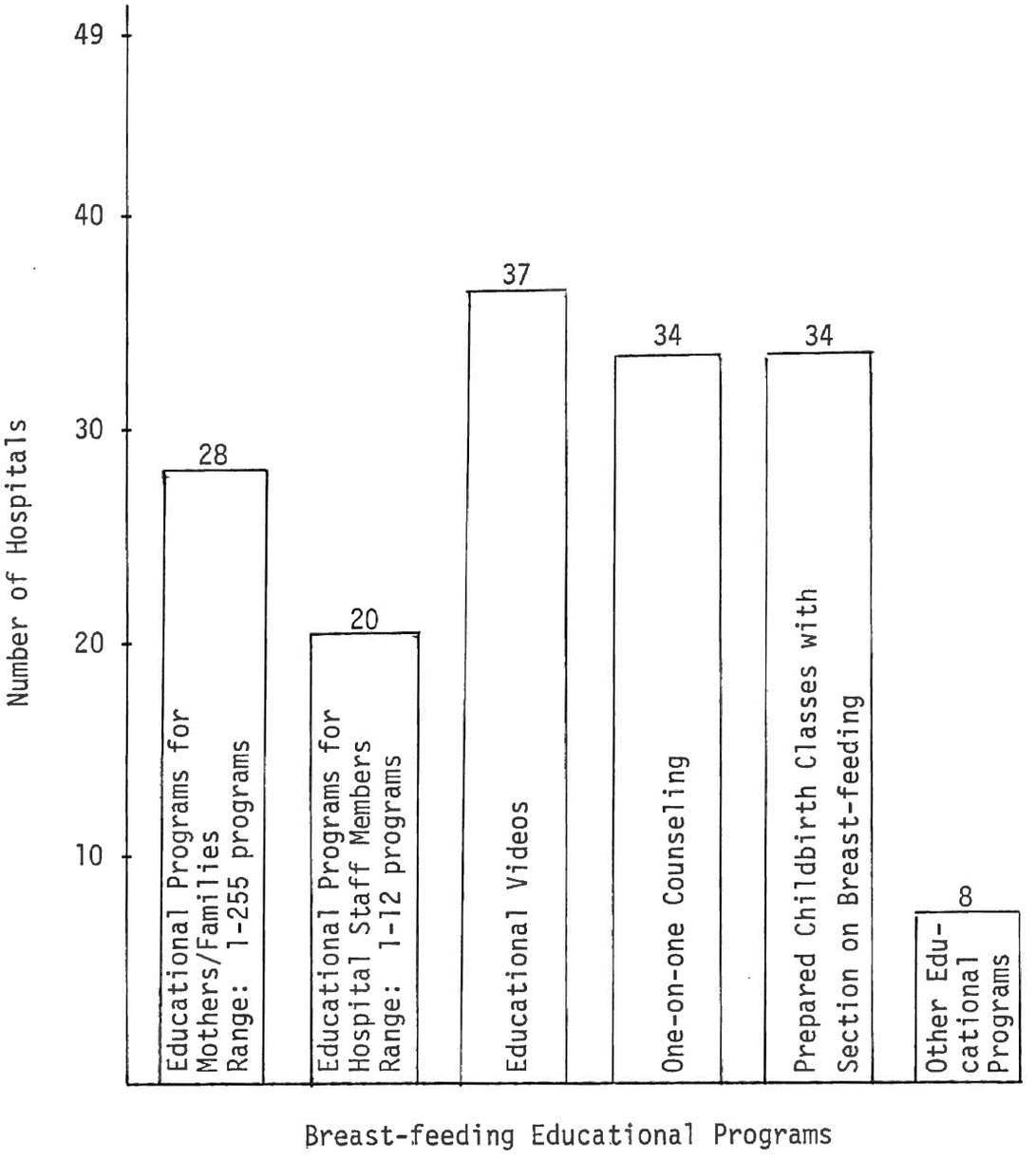

Figure 2. Number of Hospitals Providing Educational Programs

Programs for mothers and staff included, but were not limited to: videos (37 hospitals), one-on-one counseling (34 hospitals), childbirth classes with a breast-feeding component (34 hospitals), and "other" (8 hospitals) (Figure 2). "Other" breast-feeding educational programs (N=8) were listed as follows:

1. Working-mom breast-feeding classes
2. Prenatal breast-feeding classes
3. In-service
4. Public education breast-feeding series
5. Staff nurse teaching
6. Handouts and reading materials
7. O.S.U. Parenting Group
8. In-patient and out-patient breast-feeding classes

Breast-feeding Services

Eighteen hospitals reported employment of a Certified Breast-feeding Educator (C.B.E.). This service is available full-time (24 hours a day, 7 days a week) in 10 hospitals and part-time in 8 hospitals (Figure 3).

Eleven Oklahoma hospitals employ one or more Lactation Consultants (L.C.). The majority (N=8) of these services are part-time with only three hospitals reporting full-time service (Figure 3).

A breast pump loaner program is available in nine of the 49 responding hospitals, with 11 facilities reporting a breast-feeding questions hotline service. Only three large hospitals offered both services. The remaining breast pump loaner programs and hot line services were offered singularly (Table III).

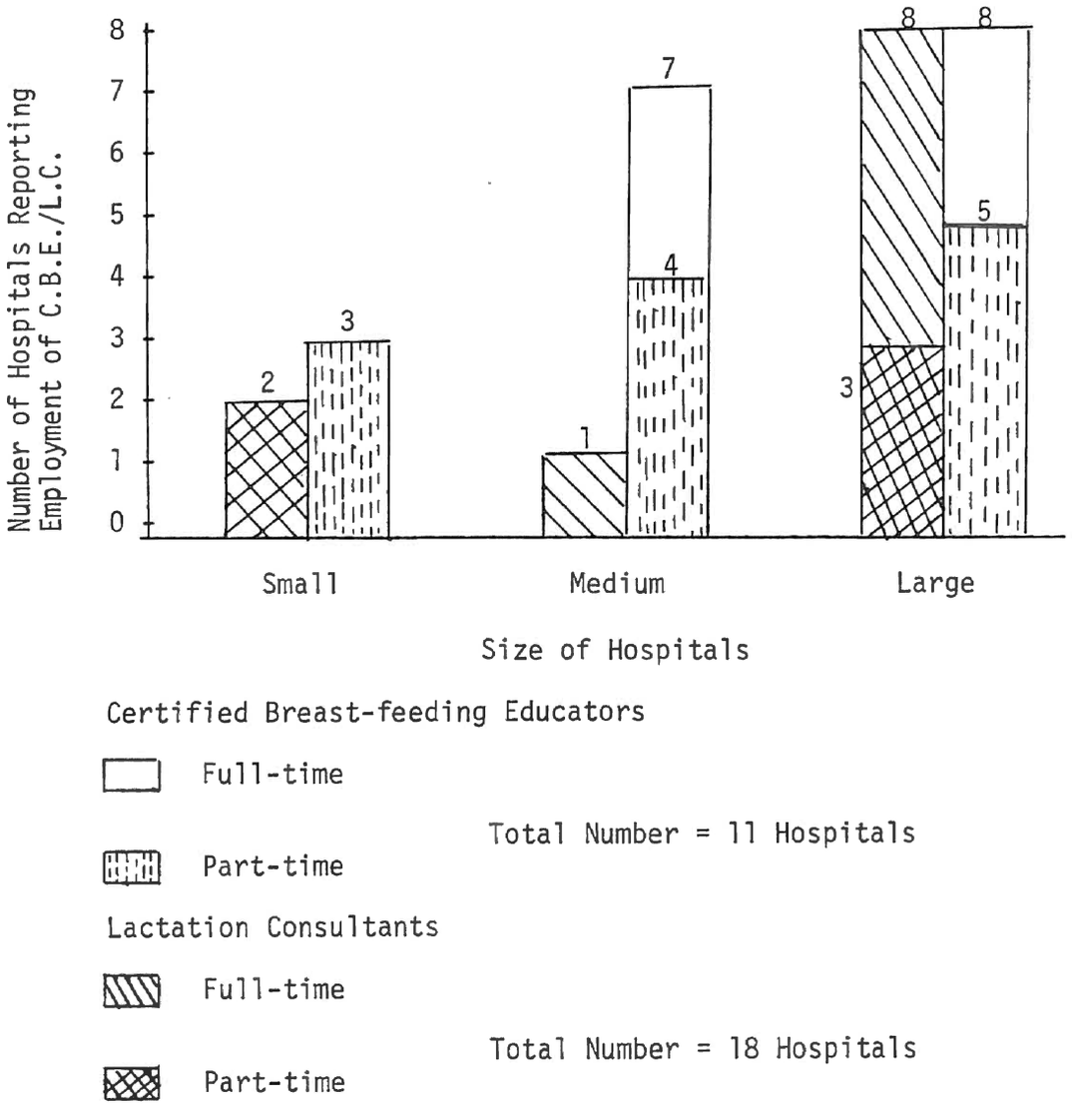

Figure 3. Hospital Employment of Certified Breast-feeding Educators and Lactation Consultants

TABLE III

OKLAHOMA HOSPITALS WITH BREAST PUMP LOANER SERVICE AND/OR BREAST-FEEDING QUESTIONS HOTLINE (N=49)

Service	N	%
Breastpump loaner service	9	18
Breast-feeding questions hotline	11	22

Breast-feeding Procedures

With a normal vaginal delivery, 66 percent (N=25) of the hospitals responding reported breast-feeding initiation at 1/2 - 2 hours post-delivery. Eighteen percent of hospitals reported the latest breast-feeding initiation post-delivery at 2-6 hours, with no hospitals reporting breast-feeding initiation after 6 hours (Table IV).

TABLE IV

NUMBER OF HOSPITALS INITIATING BREAST-FEEDING POST-DELIVERY

Procedure	Hours Post-Delivery 0-1/2	1/2-2	2-6	6-8	7-8
Number of hours breast-feeding is initiated post-vaginal delivery	6	25	7	0	0
Number of hours breast-feeding is initiated post-C-section delivery	0	18	19	0	1

Missing data N=11

Breast-feeding initiation post-caesarean section delivery increases from 18 to 50 percent at 2-6 hours and decreases 1/2-2 hours and 0-1/2 hours to 47 percent and zero percent respectively. One hospital reported breast-feeding initiation more than 8 hours post-caesarean section delivery without complications (Table IV).

Mothers who choose not to breast-feed receive medication to suppress lactation after delivery 76 to 100 percent of the time according to 28 hospitals. Eight hospitals reported that 26-75 percent of non-breast-feeding mothers received medication to suppress lactation. Five hospitals reported the lowest medication rate of non-breast-feeding mothers at 1-25 percent (Table V).

TABLE V

NUMBER OF HOSPITALS MEDICATING POST-PARTUM MOTHERS

Procedure	Percentage 0	1-25	26-50	51-75	76-100
% of non-breast-feeding mothers receiving medication to suppress lactation	0	5	4	4	28
% of breast-feeding mothers receiving medication to enhance let-down reflex	36	5	0	0	0

Missing data N=8

Breast-feeding Practices

Questions numbers 16 through 29 in the research instrument surveyed hospital practices regarding breast-feeding (Appendix A). Model hospital policies from Florida (38) and Arizona (48) served as the basis to determine strengths and weaknesses in current Oklahoma hospital practices.

Rooming-in of breast-feeding infants with their mothers should be encouraged during the hospital stay. New breast-feeding mothers in Oklahoma room-in with their infants less than half the time. Twelve out of the 49 hospitals reported rooming-in for 76-100 percent of new breast-feeding mothers and infants (Appendix C). One large hospital and three small hospitals reported no rooming-in at their institution. Rooming-in does not necessitate an architectural arrangement, but refers to keeping baby and mother together throughout the hospital stay.

Breast-fed infants should nurse on cue or at least every 2-3 hours; more frequent feedings are normal for breast-fed infants. Feedings should be at least 10-15 minutes on each breast. Most (69%) of Oklahoma hospitals practice breast-feeding on demand greater than 50 percent of the time. Two small hospitals reported no breast-feeding on demand at their hospitals, however, only one of those small hospitals reported a structured schedule for breast-feeding. Eighty-one percent of the remaining hospitals reported scheduled feedings less than 25 percent of the time (Figure 4).

Every mother should be instructed in proper breast-feeding techniques (latch-on and positioning) and re-evaluated every shift. Responses from Oklahoma hospitals indicate that about half of them provide little or no education (56%) and about one-third (32%) provide

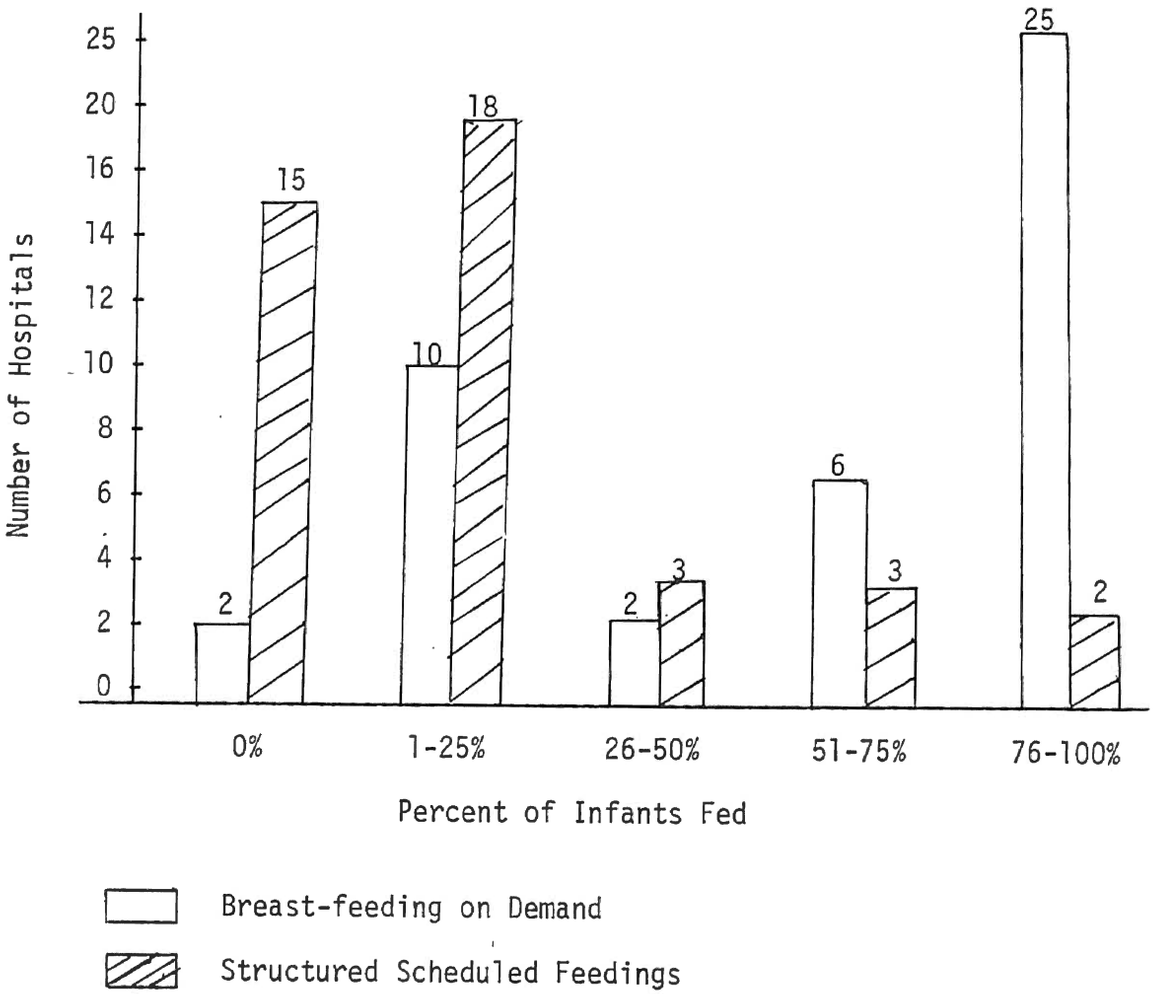

Figure 4. Breast-feeding on Demand Versus Scheduled Feedings in Oklahoma Hospitals

education from a Lactation Consultant/Certified Breast-feeding Educator or specialized breast-feeding nurse to 75-100 percent of breast-feeding mothers. Interestingly, about 37 percent of Oklahoma hospitals reported employment of a Certified Breast-feeding Educator (Figure 5).

The immediate post-partum period provides an important opportunity for education and support of breast-feeding mothers. Consistent

information by the hospital staff will reinforce this education and contribute to breast-feeding success.

Figure 5. Percentage of Breast-feeding Mothers Who Receive Education

Breast creams and ointments have not been shown to heal or prevent nipple soreness (48), therefore, they should not be routinely used by breast-feeding mothers. Routine nipple cream and ointment distribution varies widely among Oklahoma hospitals. Hospitals in Oklahoma distribute breast creams/ointments to some extent in all but six hospitals (Figure 6) (Appendix C).

Eighty-seven percent (N=32) of responding facilities infrequently dispense nipple shields. Nipple shields interfere with milk production and are not recommended for management of sore nipples. Nipple shields or artificial nipples should not be placed on mothers' nipples for purposes of teaching baby to latch-on or in an effort to treat nipple soreness (48).

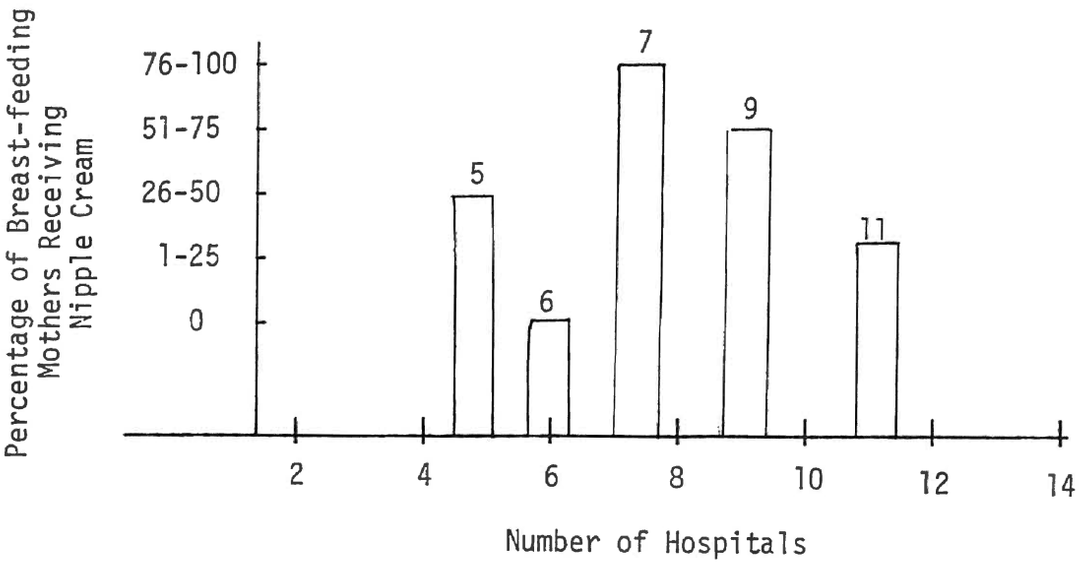

Figure 6. Nipple Cream/Ointment Distribution

Supplementary findings of sterile water, formula, or glucose water lead to diminished breastmilk production. During the immediate post-partum period, colostrum/breastmilk completely meet the newborn's nutritional and fluid needs. Supplementary feedings should be given to breast-feeding babies only when medically indicated by the physician. Several Oklahoma hospitals appear to supplement breast-feeding newborns routinely (Figure 7) (Appendix C).

Although the use of pacifiers to meet the infant's need for non-nutritive sucking is acceptable, pacifiers should not be used as a substitute for frequent breast-feeding. Four small Oklahoma hospitals reported giving breast-fed infants no pacifiers. The remaining small, medium, and large hospitals give pacifiers to breast-feeding infants 51-100 percent of the time (N=23) (Appendix C).

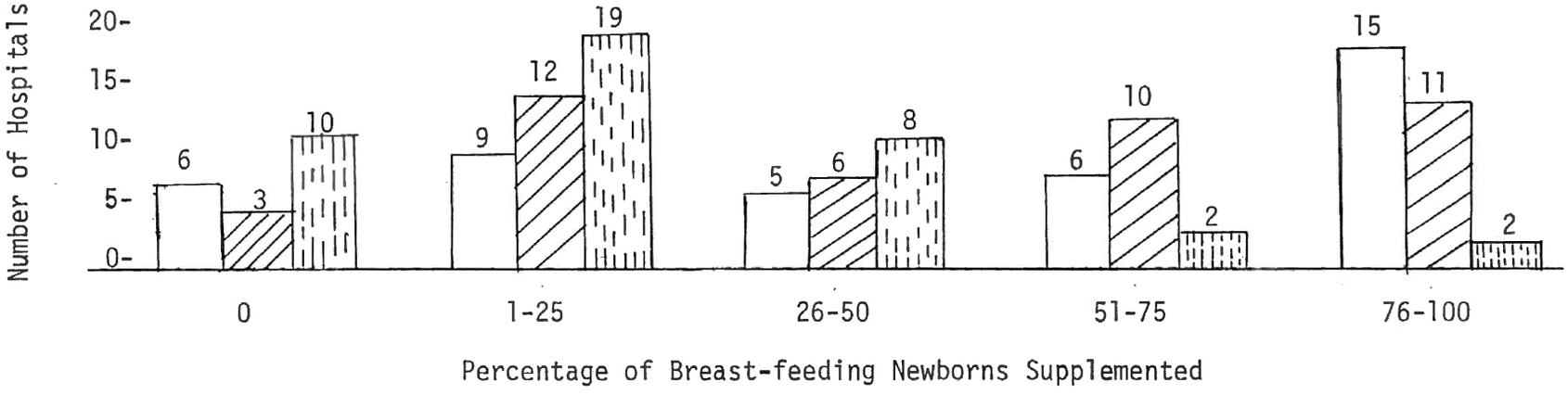

Figure 7. Breast-feeding Infant Supplementation

Breast-feeding Oklahoma mothers usually do not receive information on follow-up breast-feeding support (i.e. community resources). Twenty-five percent of the hospitals report providing no information about breast-feeding support while 55 percent of hospitals reported providing support information to less than 25 percent of breast-feeding mothers. Thirteen hospitals (32.5%) provide support information to 76-100 percent of breast-feeding mothers. Appropriate support information for breast-feeding in most rural Oklahoma counties may include County Health Departments and Women, Infants, and Children (W.I.C.) nutrition programs. Follow-up support services for breast-feeding is a factor on lactation success, therefore, breast-feeding mothers should be given a contact name and number for assistance with any feeding concern.

Predominant answers indicated that many Oklahoma breast-feeding mothers receive formula packs at hospital discharge while few receive rented or purchased breastpumps (Table VI). Formula discharge packs should be given to breast-feeding mothers only upon family or physician request. The provision of infant formula samples can act as a deterrent to successful breast-feeding after hospital discharge. Other options, including the distribution of special discharge packs for breast-feeding mothers, should be promoted by hospitals.

Fifty-five percent of Oklahoma hospitals provided assessment by a professional staff member regarding breast-feeding technique before hospital discharge. Eleven percent of hospitals, however, provided no professional assessment (Appendix C). To promote breast-feeding, attention needs to be given to answering questions and preparing the mother for breast-feeding following discharge.

TABLE VI

FORMULA PACKS AND BREASTPUMPS PROVIDED FOR OKLAHOMA BREAST-FEEDING MOTHERS

Procedure	Nunber of Hospitals	Percentage of Breast-feeding Mothers
Formula discharge packs	2	0
	2	1-25
	3	26-50
	3	51-75
	36	76-100
Rented/purchased breastpumps	12	0
	18	1-25
	4	26-50
	4	51-75
	2	76-100

TABLE VII

HOSPITALS PROVIDING PROFESSIONAL ASSESSMENT TO BREAST-FEEDING MOTHERS AT DISCHARGE

Number of Hospitals	Percentageof Breast-feeding Mothers
5	0
7	1-25
4	26-50
5	51-75
26	76-100

Research has demonstrated that the hospital experience strongly influences both the initiation and duration of breast-feeding. Obstacles reported in the literature include:

Medications given during labor and delivery
Delivery complications
Cesarean section
Baby complications
Lack of early mother-infant contact and opportunity to nurse
Use of lactation suppressants offering water and formula to the breast-fed newborn
Restricting maternal access to the baby
Restrictive feeding schedules
Lack of support for overcoming breast-feeding problems, i.e. engorgement and sore nipples
Provision of contradictory information by hospital staff (48)

Hospital Policy Concerning Breast-feeding

Hospital breast-feeding policies and practices require the support of administrative and medical staff if they are to be successful. Breast-feeding promotion will require a conscious commitment by personnel at all levels. Hospital policies suggest a strategy for ensuring that breast-feeding commitment is recognized and supported by the institution. The purpose of hospital breast-feeding policies is to create a positive and supportive environment for breast-feeding mothers during the immediate postpartum period.

Three questions concerning hospital policies were formatted in a Lickert-type scale with six categories: no policy, strongly agree, agree, undecided, disagree, and strongly disagree. Predominant answers to the question "Our hospital policy endorses breast-feeding as the best way to feed infants," indicate no policy for 41 percent of Oklahoma hospitals. Forty-three percent of responding facilities indicated that their hospital staff actively encourages mothers to breast-feed. Sixty-one percent of hospitals strongly agree with the statement, "Our

hospital staff is supportive of mothers choosing to breast-feed (Table VIII).

Testing the Hypotheses

Hypothesis One

There will be no association between breast-feeding policies (questions 30-32 in survey) and practices (questions 16-29) in survey) of Oklahoma hospitals based on size of institutions (determined by researcher to be small < 60 beds, medium 61-199 beds and large > 200 beds).

Size of hospital was not significantly associated with the three breast-feeding policy questions and 15 of the recommendations and practices questions. Only one practice (No. 26 in questionnaire) regarding information mothers received on follow-up breast-feeding support was associated with size of hospital (χ^2= 11.353, D.F. = 4, p = 0.023) (Appendix D).

In large and small hospitals, information was given to mothers 51-100 percent of the time. In medium hospitals, information was given 1-50 percent of the time. Based on the significant association between size and question No. 26, Hypothesis One is rejected, however, there was no other association between size of hospital and three policy and 13 other practice questions, therefore the researcher failed to reject Hypothesis One.

Hypothesis Two

There will be no association between breast-feeding policies and practices between teaching versus nonteaching Oklahoma hospitals.

TABLE VIII

OKLAHOMA HOSPITAL POLICY CONCERNING BREAST-FEEDING
(N=49)

Hospital Policy	No Policy	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
			Number of Hospitals			
Our hospital policy endorses breast-feeding as the best way to feed infants.	20	12	10	5	1	1
Our hospital staff actively encourages mothers to breast-feed	7	13	21	4	4	4
Our hospital staff is supportive of mothers choosing to breast-feed	0	30	16	2	1	0

All three policies and 12 of the 14 breast-feeding practices in the study were not significantly associated with the type of hospital (teaching vs. nonteaching). Only two of the breast-feeding practices were significantly associated with hospital type: feeding infants on demand ($\chi^2 = 5.153$, D.F. = 2, $p = 0.076$) and mother's use of breast creams and ointments ($\chi^2 = 7.456$, D.F. = 2, $p = 0.024$) (Appendix D).

In 90 percent of the teaching hospitals, 51-100 percent of the mothers breast-fed their infants on demand. In contrast, only 63 percent of the nonteaching hospitals reported the same. In the nonteaching hospitals, 34 percent reported that mothers breast-fed their infants on demand 1-50 percent of the time.

The majority of nonteaching hospitals (27 out of 29) provided breast creams and ointments. In contrast, 44 percent of the teaching hospitals do not provide creams and ointments.

Based on the significant association between type of hospital and demand feeding and use of creams and ointments, Hypothesis Two is rejected, however, with most of practices and all of the policies, no significant association was found. Therefore, based on these results the researcher fails to reject Hypothesis Two.

Hypothesis Three

There will be no association between breast-feeding policies and practices of Oklahoma hospitals based on the employment of a Lactation Consultant/Certified Breast-feeding Educator.

Education regarding breast-feeding was most likely provided to mothers in hospitals employing Lactation Consultants (L.C.) and/or Certified Breast-feeding Educators (C.B.E.). Employment of these

professionals was significantly associated with education provided to mothers: C.B.E. (χ^2 = 20.680, D.F. = 2, p = 0.000) and L.C. (χ^2 =10.353, D.F. = 2, p = 0.006) (Appendix D).

Seven of the 10 hospitals (70%) with Lactation Consultants provided mothers with education 51-100 percent of the time and the remaining three hospitals provided education 1-50 percent of the time. Twelve of the 15 hospitals with C.B.E.'s provided education to 51-100 percent of breast-feeding mothers while the remaining three hospitals provided education 1-50 percent of the time.

Employment of C.B.E.'s was also significantly associated with demand feeding (χ^2 = 7.212, D.F. = 2, p = 0.027); use of creams and ointments (χ^2 = 5.475, D.F. = 2, p = 0.065); and information on follow-up breast-feeding support (χ^2 = 11.620, D.F. = 2, p = 0.003) (Appendix D). Almost all of the hospitals with C.B.E.'s practiced or promoted breast-feeding infants on demand 51-100 percent of the time. In contrast, only 55 percent of the hospitals without C.B.E.'s did the same.

About half of the hospitals (53%) with C.B.E.'s tended to promote use of creams and ointments 51-100 percent of the time. In contrast, about half (56%) of the hospitals without C.B.E.'s provided creams and ointments 1-50 percent of the time. Of those hospitals reporting no breast cream/ointment usage, nine percent employed no C.B.E. and 27 percent employed a C.B.E.

Based on the significant association between employment of L.C./C.B.E. and demand feeding, use of breast creams and ointments, and follow-up education provided to mothers; the researcher rejected Hypothesis Three. The employment of these specialized professionals, however, has no significant association with three policies and 11

of the 14 practices, therefore, the researcher fails to reject Hypothesis Three.

Hypothesis Four

There will be no association between breast-feeding policies and practices of Oklahoma hospitals based on whether educational programs on breast-feeding are provided for hospital staff members.

As expected, hospitals that conduct education or in-service for staff regarding breast-feeding also tended to provide mothers with information on follow-up breast-feeding support 50-100 percent of the time. In contrast, those hospitals that do not provide education for staff tended either not to provide mothers with information on follow-up breast-feeding support or provide this information 1-50 percent of the time ($\chi^2 = 4.729$, D.F. = 2, $p = 0.094$) (Appendix D).

Hospitals that provided breast-feeding education to staff members also provided breast-feeding education to new mothers. The reverse is true for hospitals that do not provide education for staff. The significant association was ($\chi^2 = 16.194$, D.F. = 2, $p < 0.001$) (Appendix D).

Infants were given sterile water as a first feeding most likely, 51-100 percent of the time, in hospitals which do not provide education to staff. Those hospitals providing educational programs, however, did the same at 1-50 percent ($\chi^2 = 5.435$, D.F. = 2, $p = 0.066$) (Appendix D). Information shared with staff is most likely shared with mothers.

There were significant associations between hospital educational programs provided for staff and follow-up information on breast-feeding support, education provided to mothers by professional staff, and first

feeding of sterile water. Based on these results, the researcher could reject Hypothesis Four. There was, however, no association between education of staff and three policies and 11 of 14 practices, therefore, the researcher fails to reject Hypothesis Four.

Discussion of Results

No significant association was found between four independent variables and three hospital policies. Also, a significant association was not found between four independent variables and nine out of 14 hospital practices. Significant associations were found between: size of hospital and follow-up breast-feeding information given to mothers; employment of a Lactation Consultant/Certified Breast-feeding Educator and demand feeding, use of creams and ointments, education provided to mothers by professional staff, and follow-up breast-feeding support; type of hospital and use of breast creams/ointments; and education provided for hospital staff and first feeding of sterile water, education provided to mothers by professional staff, and follow-up breast-feeding support.

It is interesting to note that three significant differences were found between three independent variables and follow-up breast-feeding support information provided to mothers. Education appears to play a large part of continued breast-feeding success. As professionals are educated they tended to disseminate the information to breast-feeding mothers. Missing data from some hospitals could have been the result of lack of breast-feeding knowledge and/or education and thus reducing the likelihood of a significant association between the variables in the study.

Certified Breast-feeding Educators and Lactation Consultants appear to play a significant role in breast-feeding education, promotion, and support. These professionals are valuable resources for the future of infant feeding. Special training in human lactation is necessary if the information given is to be uniform and consistent. Health professionals should beware of counseling from personal experiences, instead, they should counsel breast-feeding mothers as experts trained in human lactation.

Based on the survey results, teaching hospitals practice feeding the breast-fed infant on demand more often than the nonteaching hospital. Teaching hospitals and nonteaching hospitals appear to be doing much the same when breast-feeding practices and routines are compared. No other significant association was found between type of hospital.

CHAPTER V

SUMMARY AND RECOMMENDATIONS

A study was conducted to determine the variations and the associations among Oklahoma hospitals' policies and practices concerning breast-feeding promotion. Hypotheses, based on the objectives of the study, were to identify the relationship between hospital policies and practices based on size of hospital, teaching and nonteaching facilities, employment of a Lactation Consultant/Certified Breast-feeding Educator, and breast-feeding educational programs provided for hospital staff.

A questionnaire was mailed to Oklahoma hospitals licensed for obstetrical services in January 1992. Data from this survey were analyzed using frequencies, percentages, and chi-square analysis to determine significant associations as related to hospital policies and practices regarding breast-feeding promotion.

In 1988, Strembel, Sass, Cole, Hartner, and Fischer (45) surveyed Arizona hospitals with regard to hospital routines that favor either breast-feeding or bottle feeding. Arizona hospitals responded at a similar rate to Oklahoma hospitals. Reported deliveries for Arizona in 1987 totaled 38,915 while Oklahoma reported 21,856 total deliveries for 1990. Oklahoma and Arizona hospitals were comparable in many of the breast-feeding practices, however, Arizona conducted their study four years earlier. Arizona's hospitals do slightly better on hospital practices which support breast-feeding (Table IX).

TABLE IX

OKLAHOMA (N=49) VERSUS ARIZONA (N=45)
BREAST-FEEDING PRACTICES

Practices	Never[a] No. of Hospitals[d]		Less than Half[b] No. of Hospitals[d]		More than Half[c] No. of Hospitals[d]	
	OK	AZ[e]	OK	AZ[e]	OK	AZ[e]
Promotes Breast-feeding						
Demand feeds	2	0	12	5	31	40
Latch-on and positioning assessment	5	1	11	6	31	38
Follow-up support service information	10	3	13	17	17	23
Rooming-in	4	6	23	10	19	25
Breast-feeding education from a lactation consultant	18	14	7	15	16	15
Promotes Bottle-feeding						
Supplemental formula feeds	10	4	27	33	4	7
Supplemental glucose feeds	3	4	18	18	21	23
Pacifiers given	4	6	14	16	23	23
First feed of sterile water	6	10	14	9	21	24
Formula packs issued at discharge	2	6	5	8	39	31
Structured feeding schedules	15	24	21	14	5	3

[a]Number of hospitals in which breast-feeding women never engage in the indicated activity.

[b]Number of hospitals in which less than half of the breast-feeding women engaged in the indicated activity.

[c]Number of hospitals in which more than half of the breast-feeding women engaged in the indicated activity.

[d]Columns do not total 45 (Arizona) and 49 (Oklahoma) because some respondents did not answer all the questions.

[e]Only data that were available from Arizona were used in comparison.

Summary of Results

The researcher failed to reject Hypothesis One, Hypothesis Two, Hypothesis Three, and Hypothesis Four because no significant differences were found between the majority of practices and three policies and some of the independent variables. Significant differences, however, were found in five out of 14 breast-feeding practices and some of the independent variables.

Based on the findings of this study, the researcher concluded that Oklahoma hospitals are generally supportive of breast-feeding as the best way to feed infants, and hospital staff are encouraging and supportive of mothers who choose to breast-feed. Hospital practices and recommendations, however, suggest that many hospitals would benefit from model hospital policies and on-going breast-feeding education. The findings of this study suggest that certain routines previously identified as barriers to the establishment of normal lactation still linger in Oklahoma hospitals.

It is also important to note that in many hospitals, education of staff results in education of mothers. Increased breast-feeding education and promotion could help reduce barriers that interfere with successful breast-feeding.

Recommendations

Based on the results of this study, the researcher proposes the following recommendations:

1. Promote professional education in human lactation and breast-feeding for hospital staff.

2. Encourage staff involvement in breast-feeding promotion and support.

3. Adopt hospital policies that endorse breast-feeding as the best way to feed infants.

4. Offer breast-feeding education and support to women/families. Seek to motivate all women to choose breast-feeding.

5. Registered dietitians should take an active role in breast-feeding education, promotion, and support.

6. Adopt hospital practices which encourage breast-feeding and eliminate those which interfere with breast-feeding.

7. Hospitals should participate in activities that strengthen support and promotion of breast-feeding within the health care system and the community.

Recommendations for Further Study

1. Continue to evaluate current healthcare services to breast-feeding mothers and infants by follow-up study and research.

2. Further study of hospital policies and practices may be helpful in monitoring the nation's progress to the Surgeon General's breast-feeding objectives.

3. Future surveys regarding breast-feeding policies and practices might include "I don't know" as a selection in the answer section.

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APPENDIXES

APPENDIX A

COVER LETTER AND SURVEY

Oklahoma Healthy Mothers, Healthy Babies Coalition

January ____, 1992

Director of Nursing / MCH Coordinator
Hospital
City/Town, Oklahoma

Dear Colleague:

The Oklahoma Healthy Mothers, Healthy Babies Coalition and the Breastfeeding Task Force of the Oklahoma State Department of Health have combined their efforts to reach Oklahoma women of childbearing age with the good news that breastfeeding will give their babies the best start in life.

As we hope you are aware, breastfeeding is unequaled in its opportunities to provide nourishment for the health, growth and development of infants. It also enhances the development of strong emotional bonds between infants and their mothers. The U.S. Surgeon General has recommended that by the year 2000, the proportion of women who breastfeed their babies should be increased to 75 percent at hospital discharge, and 50 percent when the baby is six months old. Oklahoma has adopted this goal, but before we begin strategies for implemenation, we need an estimate of where we stand now.

We invite you to join this effort by completing the enclosed survey, "Policies and Practices Concerning Breastfeeding Promotion," as it relates to normal, newborn nursing infants and their mothers in your hospital. All responses will be confidential, utilized for research purposes only, and reported strictly in the aggregate. All participating hospitals will receive a free copy of the survey results upon completion.

Please return the survey in the self-addressed, stamped envelope by February 13, 1992. If you have any questions about the survey or breastfeeding promotion activities, please don't hesitate to contact me at (405) 424-8014. Thank you for your time, cooperation and interest.

Sincerely,

Anne Roberts
State Coordinator

4030 Lincoln Boulevard, Suite 208 / Oklahoma City, Oklahoma 73105 / (405) 424-8014

OKLAHOMA HEALTHY MOTHERS, HEALTHY BABIES COALITION

HOSPITAL SURVEY
on
POLICIES AND PRACTICES CONCERNING BREAST-FEEDING PROMOTION

Name of Hospital _____ Address _____

Name/Title of Person Completing Survey _____ Phone _____

General Information:

1. Is your hospital a teaching hospital? _____Yes _____No

2. How many beds does your hospital have? _____

Obstetrics:

3. How many beds are in your obstetrical unit? _____

4. How many nurses are in your obstetrical unit? _____

5. About how many women delivered a live baby in your hospital between 1/1/90 and 12/31/90? _____

Practices for Hospitals Concerning Breast-feeding

6. About what percent of new mothers in the past year breast-fed their babies when in the hospital? (circle one)

   0% 1-25% 26-50% 51-75% 76-100%

7. About what percent of new mothers in the past year were breast-feeding their infants when discharged from the hospital? (circle one)

   0% 1-25% 26-50% 51-75% 76-100%

8. How many educational programs on breast-feeding did your hospital conduct in the past year for prospective mothers and/or families? _____ for hospital staff members?_____

9. Educational programs include:(check all that apply) (a) videos _____ (b) one-on-one counselling _____ (c) prepared child birth classes with section on breast-feeding _____ (d) other _____

10. a. Does your hospital have a Lactation Consultant? (circle one) YES NO

    b. Are these services available: _____Full time (24 hr/day, 7 days/wk) _____Part time

    c. Does your hospital have a Certified Breast-feeding Educator? (circle one) YES NO

    d. Are these services available: _____Full time _____Part time

11. Does your hospital have a breast pump loaner program? _____ A breast-feeding questions hotline? _____

12. With a normal vaginal delivery, how many hours after delivery is breast-feeding usually initiated in your hospital? (circle one)

    0 -1/2 1/2 - 2 2 - 6 6 - 8 >8 hours

13. With a caesarean section without complications, how many hours after delivery is breast-feeding usually initiated in your hospital? (circle one)

    0 - 1/2 1/2 - 2 2 - 6 6 - 8 >8 hours

14. What percent of non-breast-feeding mothers receive medication to suppress lactation after delivery of a live birth? (circle one)

    0% 1-25% 26-50% 51-75% 76-100%

15. What percent of breast-feeding mothers receive medication to enhance their let-down reflex after delivery? (circle one)

    0% 1-25% 26-50% 51-75% 76-100%

Breast-feeding recommendations and practices of hospitals vary. Mark the appropriate percentage range for each practice listed below to indicate the approximate percent of the new breast-feeding mothers in your hospital in the past year to which the practice applied. If records are not kept on these items, please indicate your "best guess."

	0%	1-25%	26-50%	51-75%	76-100%
16. What percentage of mothers "roomed-in" with their infants (practice of minimal mother-infant separation, not an architectural room/nursery arrangement?					
17. What percentage of mothers breast-fed infants on demand?					
18. What percentage of mothers breast-fed infants according to a structured schedule (e.g. every 4 hours)					
19. What percentage of mothers received education from a lactation counselor, educator or nurse with specialized training?					
20. What percentage of mothers received nipple creams or ointments?					
21. What percentage of mothers received nipple shields?					
22. What percentage of infants received a first feed of sterile water?					
23. What percentage of infants received supplementary bottles of glucose water?					
24. What percentage of infants received supplementary bottles of formula?					
25. What percentage of infants were given pacifiers?					
26. What percentage of mothers received information on follow-up breast-feeding support (i.e. community resources)?					
27. What percentage of mothers received formula packs at discharge?					
28. What percentage of mothers received, rented or purchased breastpumps upon discharge?					
29. What percentage of mothers were assessed by a professional staff member regarding breast-feeding technique before discharge?					

Hospital Policy Concerning Breast-feeding

Please check the appropriate column for each statement below to indicate how it applies to your hospital.

	No Policy	Strongly Agree	Agree	Unde-cided	Disagree	Strongly Disagree
30. Our hospital policy endorses breast-feeding as the best way to feed infants.						
31. Our hospital staff actively encourages mothers to breast-feed.						
32. Our hospital staff is supportive of mothers choosing to breast-feed.						

Comments:

Please complete and return by February 13, 1992 to: Healthy Mothers, Healthy Babies Coalition
4030 N. Lincoln, Suite 208
Oklahoma City, OK 73105

APPENDIX B

OKLAHOMA STATE DEPARTMENT OF HEALTH

APPROVAL LETTER

Joan K. Leavitt, M.D.
Commissioner

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OKLAHOMA STATE DEPARTMENT OF HEALTH
1000 NE TENTH
OKLAHOMA CITY, OK
73117-1299
AN EQUAL OPPORTUNITY EMPLOYER

January 2, 1992

MEMORANDUM

TO: Joan K. Leavitt, M.D.
Commissioner of Health

THROUGH: Denver Talley, Dr. P.H.
Deputy Commissioner for Local Health Services

FROM: Barbara Percival, Chief
Nutrition/WIC Service

SUBJECT: OSDH Breastfeeding Task Force and Oklahoma Healthy Mothers, Healthy Babies Coalition Survey

Attached is a copy of a cover letter and survey developed by the OSDH Breastfeeding Task Force in cooperation with the Oklahoma Healthy Mothers, Healthy Babies Coalition. The survey is intended to be distributed to all hospitals with obstetrical units in Oklahoma. The OSDH Breastfeeding Task Force seeks your approval of their participation in this effort. Please advise.

APPENDIX C

FREQUENCY CHARTS FOR BREAST-FEEDING PRACTICES

Practices

% of Mothers who "roomed-in" with their infants	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	4	8.7	4	8.7
1-25	16	34.8	20	43.5
26-50	7	15.2	27	58.7
51-75	7	15.2	34	73.9
76-100	12	26.1	46	100.0

Frequency Missing = 3

% of Mothers who breast-fed on demand	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	2	4.4	2	4.4
1-25	10	22.2	12	26.7
26-50	2	4.4	14	31.1
51-75	6	13.3	20	44.4
76-100	25	55.6	45	100.0

Frequency Missing = 4

% of Mothers who breast-feed by schedule	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	15	36.6	15	36.6
1-25	18	43.9	33	80.5
26-50	3	7.3	36	87.8
51-75	3	7.3	39	95.1
76-100	2	4.9	41	100.0

Frequency Missing = 8

% of Mothers who received education	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	18	43.9	18	43.9
1-25	5	12.2	23	56.1
26-50	2	4.9	25	61.0
51-75	3	7.3	28	68.3
76-100	13	31.7	41	100.0

Frequency Missing = 8

% of Mothers who received creams and ointments	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	6	15.8	6	15.8
1-25	11	28.9	17	44.7
26-50	5	13.2	22	57.9
51-75	9	23.7	31	81.6
76-100	7	18.4	38	100.0

Frequency Missing = 11

% of Mothers who received breast shields	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	5	13.5	5	13.5
1-25	27	73.0	32	86.5
26-50	2	5.4	34	91.9
51-75	2	5.4	36	97.3
76-100	1	2.7	37	100.0

Frequency Missing = 12

% of infants who received sterile water	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	6	14.6	6	14.6
1-25	9	22.0	15	36.6
26-50	5	12.2	20	48.8
51-75	6	14.6	26	63.4
76-100	15	36.6	41	100.0

Frequency Missing = 8

% of infants who received glucose water	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	3	7.1	3	7.1
1-25	12	28.6	15	35.7
26-50	6	14.3	21	50.0
51-75	10	23.8	31	73.8
76-100	11	26.2	42	100.0

Frequency Missing = 7

% of infants receiving formula	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	10	24.4	10	24.4
1-25	19	46.3	29	70.7
26-50	8	19.5	37	90.2
51-75	2	4.9	39	95.1
76-100	2	4.9	41	100.0

Frequency Missing = 8

% of infants receiving pacifiers	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	4	9.8	4	9.8
1-25	5	12.2	9	22.0
26-50	9	22.0	18	43.9
51-75	11	26.8	29	70.7
76-100	12	29.3	41	100.0

Frequency Missing = 8

% of mothers receiving follow-up information	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	10	25.0	10	25.0
1-25	12	30.0	22	55.0
26-50	1	2.5	23	57.5
51-75	4	10.0	27	67.5
76-100	13	32.5	40	100.0

Frequency Missing = 9

% of mothers receiving formula discharge packs	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	2	4.3	2	4.3
1-25	2	4.3	4	8.7
26-50	3	6.5	7	15.2
51-75	3	6.5	10	21.7
76-100	36	78.3	46	100.0

Frequency Missing = 3

% of mothers receiving breast pumps	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	12	30.0	12	30.0
1-25	18	45.0	30	75.0
26-50	4	10.0	34	85.0
51-75	4	10.0	38	95.0
76-100	2	5.0	40	100.0

Frequency Missing = 9

% of mothers receiving professional assessment	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	5	10.6	5	10.6
1-25	7	14.9	12	25.5
26-50	4	8.5	16	34.0
51-75	5	10.6	21	44.7
76-100	26	55.3	47	100.0

Frequency Missing = 2

Policies Frequency

Hospital endorses breast-feeding as the best way to feed infants	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No policy	20	40.8	20	40.8
Strongly agree	12	24.5	32	65.3
Agree	10	20.4	42	85.7
Undecided	5	10.2	47	95.9
Disagree	1	2.0	48	98.0
Strongly disagree	1	2.0	49	100.0

Staff	Frequency	Percent	Cumulative Frequency	Cumulative Percent
No policy	7	14.3	7	14.3
Strongly agree	13	26.5	20	40.8
Undecided	21	42.9	41	83.7
Disagree	4	8.2	45	91.8
Agree	4	8.2	49	100.0

Support	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Strongly agree	30	61.2	30	61.2
Agree	16	32.7	46	93.9
Undecided	2	4.1	48	98.0
Disagree	1	2.0	49	100.0

APPENDIX D

STATISTICAL SIGNIFICANCES

Size of hospital by mothers who received information on follow-up breast-feeding support

Size of Hospital % of mothers who received information on follow-up breast-feeding support

Frequency Percent Row Pct	0	1-50	51-100	Total
Large Hospitals	1 2.50 10.00	4 10.00 40.00	5 12.50 50.00	10 25.00
Medium Hospitals	1 2.50 9.09	7 17.50 63.64	3 7.50 27.27	11 27.50
Small Hospitals	8 20.00 42.11	2 5.00 10.53	9 22.50 47.37	19 47.50
Total	10 25.00	13 32.50	17 42.50	40 100.00

Frequency Missing = 9

Statistics

Statistic	DF	Value	Prob
Chi-square	4	11.353	0.023

Effective sample size = 40
Frequency missing = 9
Warning: 18% of the data are missing
Warning: 78% of the cells have expected counts less than 5.
Chi-Square may not be a valid test.

Type of hospital by infants fed on demand

Hospitals	% of infants fed by demand feeding			
Frequency Percent Row Pct	0	1-50	51-100	Total
Nonteaching	1 2.22 2.86	12 26.67 34.29	22 48.89 62.86	35 77.78
Teaching	1 2.22 10.00	0 0.00 0.00	9 20.00 90.00	10 22.22
Total	2 4.44	12 26.67	31 68.89	45 100.00

Frequency Missing = 4

Statistics

Statistic	DF	Value	Prob
Chi-Square	2	5.153	0.076

Effective Sample Size = 45
Frequency Missing = 4
Warning: 50% of the cells have expected counts less than 5.
Chi-Square may not be a valid test.

Type of hospitals by mothers who received creams and ointments

Hospitals	% of mothers who received creams and ointments			
Frequency Percent Row Pct	0	1-50	51-100	Total
Nonteaching	2 5.26 6.90	13 34.21 44.83	14 36.84 48.28	29 76.32
Teaching	4 10.53 44.44	3 7.89 33.33	2 5.26 22.22	9 23.68
Total	6 15.79	16 42.11	16 42.11	38 100.00

Statistic

Statistic	DF	Value	Prob
Chi-Square	2	7.456	0.024

Effective Sample Size = 38
Frequency Missing = 11
Warning: 22% of the data are missing.
Warning: 67% of the cells have expected counts less than 5.
Chi-Square may not be a valid test.

Certified Breast-feeding educator by mothers who received education

Certified Breast-feeding Educator Frequency Percent Row Pct	% of mothers who received education from a professional staff member 0	1-50	51-100	Total
No	18 43.90 69.23	4 9.76 15.38	4 9.76 15.38	26 63.41
Yes	0 0.00 0.00	3 7.32 20.00	12 29.27 80.00	15 36.59
Total	18 43.90	7 17.07	16 39.02	41 100.00

Frequency Missing = 8

Statistics

Statistic	DF	Value	Prob
Chi-Square	2	20.680	0.000

Effective Sample Size = 41
Frequency Missing = 8
Warning: 16% of the data are missing.
Warning: 33% of the cells have expected counts less than 5.
Chi-Square may not be a valid test.

Lactation consultant by mothers who received education

Lactation Consultant	% of mothers who received education from a professional staff member			
Frequency Percent Row Pct	0	1-50	51-100	Total
No	18 43.90 58.06	4 9.76 12.90	9 21.95 29.03	31 75.61
Yes	0 0.00 0.00	3 7.32 30.00	7 17.07 70.00	10 24.39
Total	18 43.90	7 17.07	16 39.02	41 100.00

Frequency Missing = 8

Statistics

Statistic	DF	Value	Prob
Chi-Square	2	10.353	0.006

Effective Sample Size = 41
Frequency Missing = 8
Warning: 16% of the data are missing.
Warning: 50% of the cells have expected counts less than 5.
Chi-Square may not be a valid test.

Certified Breast-feeding educator by infants fed on demand

Certified Breast-feeding Educator Frequency Percent Row Pct	% of infants fed by demand feeding 0	1-50	51-100	Total
No	2 4.44 6.90	11 24.44 37.93	16 35.56 55.17	29 64.44
Yes	0 0.00 0.00	1 2.22 6.25	15 33.33 93.75	16 35.56
Total	2 4.44	12 26.67	31 68.89	45 100.00

Frequency Missing = 4

Statistics

Statistic	DF	Value	Prob
Chi-Square	2	7.212	0.027

Effective Sample Size = 45
Frequency Missing = 4
Warning: 50% of the cells have expected counts less than 5.
Chi-Square may not be a valid test.

Certified Breast-feeding educator by mothers who received creams and ointments

Certified Breast-feeding Educator Frequency Percent Row Pct	% of mothers who received creams and ointments 0	1-50	51-100	Total
No	2 5.26 8.70	13 34.21 56.52	8 21.05 34.78	23 60.53
Yes	4 10.53 26.67	3 7.89 20.00	8 21.05 53.33	15 39.47
Total	6 15.79	16 42.11	16 42.11	38 100.00

Frequency Missing = 11

Statistics

Statistic	DF	Value	Prob
Chi-Square	2	5.475	0.065

Effective Sample Size = 38
Frequency Missing = 11
Warning: 22% of the data are missing.
Warning: 33% of the cells have expected counts less than 5.
Chi-Square may not be a valid test.

Certified Breast-feeding educator by mothers who received information on follow-up support

Certified Breast-feeding Educator	% of mothers who received information on follow-up breast-feeding support			
Frequency Percent Row Pct	0	1-50	61-100	Total
No	10 25.00 40.00	9 22.50 36.00	6 15.00 24.00	25 62.50
Yes	0 0.00 0.00	4 10.00 26.67	11 27.50 73.33	15 37.50
Total	10 25.00	13 32.50	17 42.50	40 100.00

Frequency Missing = 9

Statistics

Statistic	DF	Value	Prob
Chi-Square	2	11.620	0.003

Effective Sample Size = 40
Frequency Missing = 9
Warning: 18% of the data are missing.
Warning: 33% of the cells have expected counts less than 5.
Chi-Square may not be a valid test.

Education for staff by mothers who received information on follow-up support

Hospitals	% of mothers who received information on follow-up breast-feeding support			
Frequency Percent Row Pct	0	1-50	51-100	Total
Did not provide education for staff	8 20.51 36.36	8 20.51 36.36	6 15.38 27.27	22 56.41
Provided education for staff	2 5.13 11.76	5 12.82 29.41	10 25.64 58.82	17 43.59
Total	10 25.64	13 33.33	16 41.03	39 100.00

Frequency Missing = 10

Statistics

Statistic	DF	Value	Prob
Chi-Square	2	4.729	0.094

Effective Sample Size = 39
Frequency Missing = 10
Warning: 20% of the data are missing.

Education for staff by mothers who received education

Hospitals	% of mothers who received education from a professional staff member			
Frequency Percent Row Pct	0	1-50	61-100	Total
Did not provide education for staff	16 40.00 72.73	3 7.50 13.64	3 7.50 13.64	22 55.00 55.00
Provided education for staff	2 5.00 11.11	4 10.00 22.22	12 30.00 66.67	18 45.00
Total	18 45.00	7 17.50	15 37.50	40 100.00

Statistics

Statistic	DF	Value	Prob
Chi-Square	2	16.194	0.000

Effective Sample Size = 40
Frequency Missing = 9
Warning: 18% of the data are missing.
Warning: 33% of the cells have expected counts less than 5.
Chi-Square may not be a valid test.

Education for staff by infants who received first feed of sterile water

Hospitals	% of infants who received sterile water			
Frequency Percent Row Pct	0	1-50	51-100	Total
Did not provide education for staff	3 7.50 13.64	4 10.00 18.18	15 37.50 68.18	22 55.00
Provided education for staff	3 7.50 16.67	9 22.50 50.00	6 15.00 33.33	18 45.00
Total	6 15.00	13 32.50	21 52.50	40 100.00

Statistics

Statistic	DF	Value	Prob
Chi-Square	2	5.435	0.066

Effective Sample Size = 40
Frequency Missing = 9
Warning: 18% of the data are missing.
Warning: 33% of the cells have expected counts less than 5.
Chi-Square may not be a valid test.

VITA

Traci L. Lundy

Candidate for the Degree of

Master of Science

Thesis: BREAST-FEEDING POLICIES AND PRACTICES AMONG OKLAHOMA HOSPITALS

Major Field: Nutritional Science

Biographical:

Personal Data: Born in Milton, Florida, June 17, 1960, the daughter of Richard and Anita Dettle.

Education: Graduated from Helena-Goltry High School, Helena, Oklahoma in May, 1978; received Bachelor of Science degree in Vocational Home Economics Education from Northwestern Oklahoma State University in May, 1983; completed dietetic requirements (Plan IV) in May, 1989; and Approved Preprofessional Practice Program from Oklahoma State University in May, 1990; became a registered dietitian (RD) in October, 1990; completed requirements for the Master of Science degree at Oklahoma State University in May, 1993.

Professional Experience: Public Health Nutritionist, Oklahoma State Department of Health, May 1990 to present.

Professional Organizations and Honors: Recipient, Winterfeldt Graduate Scholarship, Spring, 1990; member of the American Dietetic Association (ADA); member of the Pediatric Nutrition Practice Group within the ADA; member of the Oklahoma Dietetic Association; Oklahoma State Department of Health Breast-feeding Task Force member.