Suggestions for Future Activities

Forty-one percent (46/113) of respondents recommended action related to public education, including:

- Conduct media campaigns at the national, State, and local levels. Use printed materials and television and radio public service announcements, and request that local television and radio talk shows run segments on breastfeeding.

- Work toward making breastfeeding the normative mode of infant feeding, through media campaigns, but also by advocating for positive depiction of breastfeeding on television shows, including soap operas and prime time series and movies.

- Incorporate information about breastfeeding and human lactation in elementary and secondary school biology, health, and family life curricula.

- Target programs for Hispanics, blacks, and low-income women.

- Designate a breastfeeding month at the national or State level.

SUPPORT IN THE HEALTH CARE SYSTEM

Recommendation:
Strengthen the support for breastfeeding in the health care system

ACTIVITIES REPORTED

The 1984 Surgeon General's workshop recognized that increasing support for breastfeeding in the health care system is crucially important in breastfeeding promotion efforts. The workshop report states: "Support for breastfeeding needs to be conspicuous in primary care, prenatal care, and postpartum care provided in a wide variety of ambulatory care settings as well as labor, delivery, postpartum, and infant care provided in hospital settings" (DHHS 1984, p. 69). Seventy-three percent (83/113) of respondents indicated that they engage in some activities related to this recommendation. Activities reported include developing policies, standards, and protocols; establishing hospital-community liaisons; establishing laws and regulations; and training peer counselors as a way of strengthening support in the health care system.

Policies, Standards, and Protocols

Sixty-four percent (72/113) of the respondents reported that they promoted coordinated policies and practices to increase support for breastfeeding in the health care system. Activities described include developing prenatal breastfeeding promotion protocols, issuing standards for staff education, and instituting hospital policies regarding breastfed babies (e.g., allowing rooming-in or continuous feeding and prohibiting supplemental feedings). Several examples of such efforts are described below.

In 1990 the United States signed a WHO/UNICEF joint statement, the *Innocenti Declaration*, as one of the participants in the WHO/UNICEF policymakers' meeting on "Breastfeeding in the 1990s: A Global Initiative" (see appendix I, page 106). This meeting, cosponsored by the United States Agency for International Development and the Swedish International Development Authority, was held at the Spedale degli Innocenti in Florence, Italy, from July 30 to August 1, 1990. The declaration describes the current state of breastfeeding promotion worldwide, and outlines goals to be reached by 1995. One of these goals is for governments to ensure "that every facility providing maternity services fully practices all ten of the Ten Steps to Successful Breast-feeding set out in the joint WHO/UNICEF statement *Protecting, Promoting, and Supporting Breast-feeding: The Special Role of Maternity Services.*" Two sections of that statement—the Ten Steps to Successful Breast-feeding, and the Checklist for Evaluating the Adequacy of Support for Breast-

feeding in Maternity Hospitals, Wards, and Clinics—are reprinted in appendix J, on page 108.

The Maternal and Child Health Bureau, DHHS, has allocated funds for 15 maternal and child health improvement SPRANS projects, designed to assist States to develop a continuing State program capacity in breastfeeding promotion. Arkansas, Colorado, Kentucky, West Virginia, and Wisconsin were awarded grants for 3 years beginning in October 1990. Five additional grants were awarded in October 1991, and another five will be awarded in 1992. These projects are implementing a variety of activities, including providing education to professionals and patients, as well as working to enhance support for breastfeeding in the health care system through the adoption of breastfeeding policies, standards, and protocols.

In 1990 the National Association of WIC Directors (NAWD) issued *Guidelines for Breastfeeding Promotion in the WIC Program*, in order to assist State and local agencies in initiating and/or strengthening existing breastfeeding promotion and support programs. Each of the nine guidelines set forth is accompanied by specific strategies for implementation. (The guidelines are reprinted in appendix H, see page 98). In early 1991, the NAWD Breastfeeding Promotion Committee surveyed State WIC agencies to determine the utilization of the guidelines. The survey showed that 46 out of 59 programs surveyed had implemented activities coordinated with health care programs and professional organizations in 1990, and 47 planned to do so in 1991.

In 1988, the Healthy Mothers, Healthy Babies coalition conducted a survey of hospital practices related to breastfeeding. The questionnaire included a request form to enable the respondent to obtain an assortment of resources on breastfeeding at no charge. Nearly 900 hospitals responded, and the survey results were analyzed by the Center to Prevent Childhood Malnutrition. In 1989, a followup survey was conducted in order to determine the usefulness of the publications which had been distributed and to assess changes in hospital breastfeeding promotion efforts. Thirty-five percent of the hospitals responding reported that they had organized breastfeeding committees at their institution.

The goal of the Arkansas Best Start Breastfeeding Promotion Project (funded through a SPRANS grant from MCHB) is to increase the incidence and duration of breastfeeding throughout the State—particularly among the WIC and MCH clients of the Pulaski Central Health Unit of Pulaski County—by developing and implementing a comprehensive breastfeeding promotion program for low-income women. Hospitals in Pulaski County with maternity services are being surveyed about their breastfeeding practices and policies. Pediatricians, obstetricians, and family practitioners in the area are also being surveyed about their breastfeeding management and patient education practices. This information will then be utilized to determine recommended practices and policies for in-hospital breastfeeding management. Training sessions on the recommended practices and policies will be offered to interested hospital health professionals. There are also plans to review current breastfeeding policies and counseling standards in the State maternity and child health manuals; to draft and review policies related to commitment to breastfeeding; and to provide support and training for all staff in targeted clinics in order to

promote and support attitudes and approaches that provide positive reinforcement for breastfeeding families.

The Alameda County (California) Infant Feeding Project, an MCHB-funded SPRANS project, worked with low-income minority women from areas with high infant mortality rates who gave birth at a county public hospital. In-hospital and prenatal protocols which promote breastfeeding have been completed, and the project staff are planning ways to find funding for continuing breastfeeding counseling in the hospital.

In Florida, the State breastfeeding coordinator worked with the Florida Healthy Mothers, Healthy Babies coalition and the Florida Section of NAACOG to develop hospital protocols for breastfeeding. The WIC program has awarded a grant to the Florida HMHB coalition for the development of a training manual to implement the hospital protocols, *Model Hospital Policies and Protocols to Support Breastfeeding Mothers: Training Program for Hospital Staff.* Staff from 57 of the 100 hospitals in Florida participated in these training sessions. These facilities account for more than 70 percent of the hospital beds in the State. Participants also included 9 of the 10 target hospitals selected for special attention because they provide care to most of the WIC program patients in the State.

Indiana's Breastfeeding Promotion Program, another MCHB-funded SPRANS project, also sought to increase the percentage of infants who are breastfed. A breastfeeding advisory council met quarterly to guide this project, and three working subcommittees were responsible for implementation of activities. The Health Care Systems Subcommittee focused on activities which helped to develop institutional and professional policies that were congruent with the project's breastfeeding promotion philosophy. The project completed a survey of physicians and hospitals in order to evaluate breastfeeding management practices and assist in developing a training curriculum for education of health professionals on breastfeeding.

One of the goals of the Montgomery County (Maryland) Breastfeeding Coalition is to identify and support pathways to a satisfying breastfeeding experience during the prenatal period, in the hospital, in the community, and in the workplace. The coalition has distributed model hospital policies from Wellstart and UNICEF to all hospitals in the county, and also urged hospitals, health department maternity clinics, and WIC programs to develop their own policies. The coalition plans to continue to work within the health care system in order to encourage and support the development and implementation of model policies, standards, protocols, and curricula that reflect a concern for lactation and the promotion of breastfeeding.

In 1991, the Tennessee Department of Health and Environment implemented a policy for all health departments in the State against the display of infant formula products and materials. The policy calls for all print materials, audiovisual materials, and office supplies to be free of formula product names; for health department staff to exhibit a positive attitude toward breastfeeding and to make appropriate educational materials available to patients; and for efforts to be made to provide an area for women to breastfeed their infants in the program or clinic setting.

The Family Resource Center, Charleston Area Medical Center, under contract with the West Virginia Maternal and Child Health Program, is currently developing breastfeeding protocols to increase the rate of breastfeeding within its client population. To date, promotional and educational materials have been developed, prenatal and postnatal breastfeeding classes have been planned, two nurse-lactation specialists have been hired, and a hospital "warm-line" has been established to answer questions from discharged patients to facilitate the maintenance of breastfeeding.

Hospital-Community Liaisons

Liaisons between community agencies and hospitals are important in fostering coordination and continuity of breastfeeding promotion activities in the health care system. Forty-two percent (47/113) of respondents reported that they worked to establish hospital-community liaisons. Several of these efforts are described below.

Arkansas' Best Start Program has developed a joint multidisciplinary team with representatives from the Arkansas Department of Health, the University of Arkansas for Medical Sciences, and the University of Arkansas Hospital. The team is participating in the first field trial of the curriculum entitled "Health Professionals Curriculum in Lactation Management," which was developed by Wellstart in 1990. Its objective is to establish a model system for breastfeeding management and support using the facilities of the University of Arkansas Hospital and a large local health unit in the same county.

In December 1986, the Arizona Healthy Mothers, Healthy Babies coalition formed a breastfeeding task force. This interdisciplinary task force includes hospital nurses, private lactation consultants, public health nutritionists, and physicians. The task force issued a model breastfeeding hospital policy which was endorsed by 14 health professional organizations, developed a hospital breastfeeding education protocol, and completed a survey of hospital breastfeeding practices.

The Tennessee Hospital Association, in conjunction with the Tennessee Department of Health and Environment, has sponsored two mailings to all Tennessee hospitals and public and private prenatal and pediatric health care providers addressing the Best Start campaign and the need for supportive hospital practices. A third letter is planned to encourage hospital staff to complete the infant feeding information on the metabolic newborn screening form so statewide data on the incidence of breastfeeding in the hospital can be obtained. The letter will outline ways in which the information from the form is being put to practical use.

Laws and Regulations

The USDA's Food and Nutrition Service has established regulatory provisions for the WIC program and Commodity Supplemental Food Program (CSFP) to encourage mothers to breastfeed and to provide appropriate

nutritional support for breastfeeding participants. For example, both WIC and CSFP have designated breastfeeding women to be at a higher level of nutritional risk than nonbreastfeeding, postpartum women, and thus they have a higher priority for receiving services.

In early 1991, NAWD conducted a survey of WIC programs in 48 States and 11 American Indian nations and territories in order to determine how well the State agencies were progressing with the implementation of the new WIC Reauthorization Act breastfeeding provisions and the NAWD guidelines. The survey showed that the majority of WIC programs conducted activities related to the new provisions and guidelines in 1990, and plan to conduct more such activities in 1991. For example, 42 programs reported appointing a breastfeeding coordinator. Examples of activities undertaken by two WIC programs to implement the new requirements are described below.

The Florida WIC program reported implementing several activities related to the new regulations. These included appointing a State breastfeeding coordinator and establishing a breastfeeding promotion team. All WIC local agencies were asked to develop a breastfeeding promotion plan, identify a staff member to be the local breastfeeding coordinator, and provide training on breastfeeding management and promotion for local coordinators. Sixteen State grants were awarded to local agencies for breastfeeding promotion activities.

The Nebraska Department of Health reported that its WIC program had designated a breastfeeding promotion coordinator, established policies for a positive clinic environment, and identified other promotion efforts at the local level.

Training Peer Counselors

Twenty-eight percent (32/113) of respondents reported training peer counselors as a way to strengthen support for breastfeeding in the health care system. Peer counselor programs are discussed in greater detail in the fifth chapter, Support Services in the Community (see page 33).

Barriers to Breastfeeding

Of respondents who listed barriers to breastfeeding, 33 percent (28/84) mentioned the problems that exist in the health care system. Characteristics of the hospital environment—such as separation of the mother and infant, glucose water feeding, and negative attitude of the staff—were mentioned by 31 percent (26/84) of respondents. Advertising by formula companies, distributing free formula packs at hospitals and clinics providing health care for maternity patients and infants, as well as through WIC programs, and mailing formula packs and coupons to new mothers were mentioned as having a negative impact by 26 percent (22/84) of respondents. Physical problems such as maternal illness or cesarean section were reported by 13 percent (11/84) as a barrier to breastfeeding.

SUGGESTIONS FOR FUTURE ACTIVITIES

Twenty-seven percent (30/113) of respondents suggested improving support for breastfeeding in the health care system, including the following:

- Develop and advocate for adoption of hospital policy guidelines that support breastfeeding. Issues that should be addressed are distribution of discharge formula or coupons, separation of mother and infant, breastfeeding on demand, use of glucose water, and availability of lactation management services and support.
- Establish and distribute national guidelines for perinatal care, including proper breastfeeding management.
- Work to coordinate breastfeeding promotion efforts and services provided by different agencies and by private health care providers.
- Make clinic and hospital environments more supportive of breastfeeding by removing formula company materials, displaying posters and other materials which promote breastfeeding, and providing an area in the waiting room where women can breastfeed.

SUPPORT SERVICES IN THE COMMUNITY

Recommendation:
Develop a broad range of support services in the community

ACTIVITIES REPORTED

In order to cope with questions and problems related to breastfeeding and lactation, women need to have access to services which encourage and assist lactation and breastfeeding during the prenatal, delivery, and postpartum periods. The report of the 1984 Surgeon General's workshop stated that community support services should: ". . . 1) emphasize the strengths of the family; 2) respect the variations found within different cultural, ethnic, and economic groups as well as life styles; 3) offer a continuum of care for the mother and baby throughout the reproductive cycle and infancy; and 4) effectively use community resources" (DHHS 1984, p. 19). This recommendation has received considerable attention from the respondents to our survey: 74 percent (84/113) reported engaging in at least one activity related to this recommendation. Activities reported by respondents include providing client education and followup services, developing support groups, and providing telephone hotlines.

Client Education and Followup Services

The delivery of breastfeeding information, counseling, and support to expectant and new mothers is an important component of breastfeeding promotion. These mothers need information to help them with their infant feeding decisions; require instruction at the initiation of breastfeeding; and benefit from lactation management, counseling, and support services throughout the breastfeeding period. Many programs offer client education and followup services; some are described below (see table 6).

Table 6—Client education and followup services

Type of Activity	Percentage of Respondents Reporting (*N*=113)
Client education	70% (79)
Prenatal period	61% (69)
Hospital stay	29% (33)
Postdischarge	50% (57)
Individual counseling of clients and families	58% (65)
Follow-up services related to breastfeeding management	42% (48)

The Children's Rehabilitation Unit at the University of Kansas Medical Center in Kansas City, Kansas, provides client counseling and community outreach as part of its breastfeeding promotion effort. The program is staffed by a pediatric nurse practitioner for 20 hours each week and by a registered dietitian for 5 hours each week.

The program goal of the breastfeeding project of the Missouri Department of Health is to facilitate and support the woman's decision to breastfeed. Questionnaires are administered to clients in order to assess their knowledge and attitudes about breastfeeding and to identify and eliminate misconceptions. Pregnant women in this WIC program participate in no less than two group discussions/classes about breastfeeding, and information about what to expect at the hospital is provided to pregnant women at 32–40 weeks' gestation. A nutritionist has established daily communication with the nursing staff at the University of Missouri Hospitals and Clinic in order to identify mothers who have recently delivered and who are breastfeeding. The nutritionist and a peer counselor make contact with new mothers during a hospital or home visit to offer support and answer questions.

The Oregon Health Sciences University (OHSU) in Portland, Oregon, established a breastfeeding service in 1985. This program offers prenatal classes, provides management of OHSU patients, and accepts community referrals for inpatients and outpatients.

The Texas Children's Hospital Lactation Support Program, in order to encourage feeding hospitalized infants their own mother's milk, provides equipment, instructions, and supplies for expressing breastmilk, as well as facilities for storage and for screening for contamination. It also provides for lactation counseling and assistance with establishment of suckling following term and preterm deliveries, fortification of maternal milk for feeding premature infants, home visits, and an outpatient lactation clinic. The program is staffed by nurses (assigned to the program as lactation counselors), a neonatologist, and a lactation physiologist. Approximately 100 women participate each month. This number is expected to grow in the next few years as the program expands. The agencies collaborating on this project are Texas Children's Hospital, Baylor College of Medicine, Children's Nutrition Research Center, and St. Luke's Episcopal Hospital.

Support Groups

The provision of culturally appropriate support groups which provide assistance and counseling for breastfeeding women was one of the strategies to strengthen community support for breastfeeding suggested by the Surgeon General's workshop. Support groups, which 37 percent (42/113) of respondents reported utilizing, are commonly a gathering of new mothers who meet regularly to discuss their experiences with breastfeeding. The groups can be a formal class led by a professional, or a less formal discussion led by a peer. Most of the groups described by respondents were peer support groups. Descriptions of a few of these activities follow.

La Leche League's Breastfeeding Peer Counselor Program was piloted in Illinois in 1987. It has trained 60 program coordinators and over 100 mothers as peer counselors in the Illinois area. These women assist health professionals in breastfeeding promotion programs, talk to mothers in clinic waiting rooms, lead breastfeeding support groups, and provide phone help to mothers who have questions about breastfeeding. There are currently 10 of these programs in Florida, as well.

The Colorado Department of Health reported that a chapter of the Nursing Mothers Counsel (NMC) has been organized in the State. NMC is a nonaffiliated, nonprofit, volunteer organization whose goal is to help mothers enjoy a relaxed and happy relationship with their babies. NMC members provide one-on-one counseling for new and expectant parents. Telephone contact is made to provide information and answer questions about breastfeeding. The counselor then remains available to the mother after the birth and throughout the mother's nursing experience to offer any additional information, support, and encouragement needed. NMC chapters also exist in California and Indiana.

The Ohio State University Research Foundation was awarded a SPRANS grant by MCHB in order to improve breastfeeding rates in a low-income, urban population. An integral component of this project was the use of peer counselors in both the prenatal education and postpartum support aspects of the program. Project evaluation showed that women who, in addition to receiving education from professional staff, were introduced to a peer counselor of similar ethnic, racial, and socioeconomic background, were more likely to have chosen to breastfeed at delivery than women who received the education component only.

The Tennessee Department of Health and Environment (TDHE) and the Center to Prevent Childhood Malnutrition have initiated Breastfeeding and Baby Care Support Group Projects designed to encourage local women to take charge of bringing their peers together for support and to share information on breastfeeding. In June 1989, three WIC participants in two rural southwest Tennessee counties were hired to work 10 hours a week to organize and lead these monthly breastfeeding peer support meetings. These peer counselors were trained and supervised by the coordinator of a SPRANS breastfeeding promotion project targeting the WIC programs in the two rural counties. Since September 1989 these peer counselors have led breastfeeding support meetings and organized "enrichment" meetings, where guest speakers talk to the group about topics important to them, such as exercising with their baby, dressing on a budget, using coupons, and cardiopulmonary resuscitation. The peer counselors also contact 50 to 80 women a month by telephone to invite them to meet with breastfeeding counselors, inquire about their breastfeeding, and to administer a self-esteem questionnaire. The project has now been expanded to include eight peer counselors. The Center to Prevent Childhood Malnutrition is evaluating this project for its impact on self-esteem and on breastfeeding rates. The TDHE has implemented six projects statewide based on this model.

The San Antonio Breastfeeding Project is an 18-month program designed to test the hypothesis that women who receive prenatal intervention from a culturally sensitive, breastfeeding *doula* (peer counselor) will have higher breastfeeding rates than those who receive education only and those who receive no intervention. Women in the experimental group viewed a breastfeeding skills training video and discussed cultural concerns about breastfeeding with a peer counselor who was breastfeeding during the discussion session. Study results are currently being compiled.

The Breastfeeding Peer Counseling Program developed by Children's Hospital in Washington, DC, is designed to train mothers in the WIC program to serve as breastfeeding support and peer counselors. The program has produced the Breastfeeding Peer Counselor Manual which describes program implementation, peer counselor training and monitoring, followup training activities, and program evaluation measures.

The West Virginia WIC program has developed a peer counselor training manual, using the Best Start counseling strategy, to teach mothers with breastfeeding experience to counsel, encourage, and educate women in the art of breastfeeding. These trained peer counselors will give prenatal and postnatal breastfeeding support and information to women in local WIC clinics and specific prenatal health clinics.

Telephone Hotlines

The use of telephone hotlines as a method of providing outreach and followup support to lactating women was reported by 22 percent (25/113) of respondents. A variety of types of hotlines were reported. Some were staffed by peer counselors and others by community health professionals such as dietitians. Phone lines were in operation from 24 hours per day for 7 days a week to 6 hours per day for 3 days a week.

The Arkansas Best Start Program has implemented a statewide breastfeeding helpline to provide information and problem-solving services to breastfeeding families and health care professionals. The line is answered during working hours by the staff of the breastfeeding center.

La Leche League International provides a national toll-free phone information service. Callers can get referrals to local La Leche League groups, a free catalog of breastfeeding and parenting literature, and answers to breastfeeding questions.

The New Hampshire Division of Public Health reported that one local WIC agency has received funding from a foundation for the "Breastfeeding Connection," a telephone support system for breastfeeding mothers. It has been operated by a staff nutritionist for several years.

North Carolina's First Step Hotline provides information and referral on all aspects of prenatal and infant care, including breastfeeding. The hotline is jointly sponsored by the North Carolina Division of Maternal and Child Health, the March of Dimes, the Governor's Commission on Infant Mortality, and the Healthy Start Foundation.

The phone number for the telephone counseling service of the Children's

Nutrition Research Center (CNRC) in Texas is given to all individuals who refer potential research subjects to CNRC and to all potential research volunteers referred. In addition, some 1,000 women are contacted each month either prenatally or 2 weeks postnatally and offered lactation consultation if needed. Lactation consultants, dietitians, and a lactation physiologist are available during working hours to answer questions. In addition, backup and consultation is provided by pediatricians, neonatologists, nutritionists, pediatric gastroenterologists, and other faculty members. The target audience for this service includes nurses, physicians, dietitians, and research volunteers in the Houston area, but calls are received from throughout the United States. The agencies collaborating in this effort are Baylor College of Medicine, Texas Children's Hospital, Children's Nutrition Research Center, St. Luke's Episcopal Hospital, Methodist Hospital, and the MacGregor Clinics.

Barriers to Breastfeeding

Of the 84 respondents who listed barriers to breastfeeding, 60 percent (50/84) mentioned barriers related to community support services (see table 7).

Table 7—Community support services barriers to initiation and continuation of breastfeeding

Barriers	Percentage of Respondents (*N*=84)
Lack of support from family and friends	52% (44)
Lack of knowledge, education among women	45% (38)
Lack of postpartum support services	26% (22)
Lack of role models who breastfeed	17% (14)

Suggestions for Future Activities

Thirty-five percent (40/113) of respondents recommended improving or expanding breastfeeding support services, including:

- Sponsor peer support groups and train peer counselors.
- Provide toll-free information hotlines and telephone support systems.
- Expand the use of lactation counselors, both in the hospital and in the community.
- Provide postpartum followup for new mothers via home visits or phone calls.
- Promote breastfeeding in prenatal classes.
- Include families in breastfeeding education efforts.

Support in the Workplace

Recommendation:
Initiate a National Breastfeeding Promotion Effort
Directed to Women in the World of Work

Activities Reported

The 1984 Surgeon General's Workshop on Breastfeeding and Human Lactation identified several barriers women often encounter in the workplace and at school, including lack of information on the part of the public, employers, and health care providers; logistical problems such as lack of time, equipment, and space for nursing or using breast pumps; and a social, psychological, and political climate which significantly separates the worlds of work and home that can be hostile to a working woman's attempts to combine breastfeeding and employment.

Forty-four percent (50/113) of the survey respondents reported some activities related to building support for breastfeeding in the workplace. Such activities included educating employees and employers; providing breastfeeding facilities and implementing policies in the respondent's own workplace; promoting policies and guidelines for other workplaces; conducting surveys and assessments; initiating breast pump loan programs; and implementing model or demonstration projects.

Education

Provision of education and educational materials was the most commonly reported activity. Twenty-nine percent (33/113) of the respondents provided education to employees and 14 percent (16/113) provided education to employers.

The Healthy Mothers, Healthy Babies coalition's Subcommittee on Breastfeeding Promotion has prepared a resource list of publications which address breastfeeding and working women, and is developing a breastfeeding fact sheet to send to employers. In addition, the Healthy Mothers, Healthy Babies National Conference, held in the fall of 1991, had a workshop which focused on breastfeeding and working women.

The Arizona Department of Health Services staff have provided support to the Nutrition Council of Arizona Breastfeeding Advocates, which is developing a consumer guide on storing and feeding breastmilk, preparing a list of electric breast pump rental stations, and distributing these materials to hospitals and health care professionals. The department has also provided training sessions on working and breastfeeding at three meetings: the Childbirth Education Association of Greater Phoenix Conference in November 1986, the Northern

Arizona Nutrition Education Workshop in July 1987, and the Nutrition Council of Arizona Annual Meeting in April 1989.

The Oregon Health Sciences University has developed information for employers on the establishment of facilities to promote breastfeeding among working women.

Breastfeeding Facilities and Practices in Respondents' Workplaces

The provision of facilities for employees to pump and store breastmilk and/or the implementation of practices to support breastfeeding employees at the respondent's workplace were reported by 22 percent (25/113) of respondents (see table 8).

In Arizona, two county health departments have implemented formal policies which enable breastfeeding employees to bring infants up to 4 months of age to work.

The Center to Prevent Childhood Malnutrition, in Bethesda, Maryland, provides its employees with 3 months of maternity leave, and allows breastfed infants to be brought to work until at least 6 months of age.

Through combined efforts the New Mexico Department of Health and Environment's Division of Health Promotion and the New Mexico Breastfeeding Task Force are providing two electric breast pumps for use by working mothers employed in the health department's South Capitol Complex.

The Division of Maternal and Child Health of the Ohio Department of Health permits a 6-month maternity leave, which makes it easier for women to establish a breastfeeding relationship with their infants in the early months of life. In addition, Ohio's Governor has mandated that day care facilities be incorporated into each new State office building. As a result, two day care facilities have recently been established in downtown Columbus, thus allowing breastfeeding mothers easier access to their infants.

At the Children's Nutrition Research Center (CNRC) in Texas, individual assistance from a lactation consultant is provided to employees upon request. In addition, the CNRC, in conjunction with Texas Children's Hospital, provides a private room, an electric pump, sterile collection kits, and freezer space for lactating employees.

In November 1991, a room equipped with a breast pump and refrigeration was established for nursing mothers at the Food and Nutrition Service, USDA, in Alexandria, Virginia. A baseline survey was completed to assess attitudes toward breastfeeding and employee needs and to provide input for better project planning. A pamphlet providing basic information on breastfeeding, expressing and storing breastmilk, and the services available through the breastfeeding mothers' room will be produced and distributed to interested employees.

La Leche League International reported that employees at the National Security Agency (NSA) in Washington, DC—with the help of the NSA Medical Center and a parent group at NSA called the Child Development Care

Association—have acquired five electric breast pumps and several rooms for the use of breastfeeding employees.

At Georgetown University Hospital in Washington, DC, two electric breast pumps are available for staff use in a special private area of the hospital's Lactation Center. Refrigeration is available in most work areas.

Table 8—Respondents who reported provision of breastfeeding facilities and/or implementation of practices to support breastfeeding in their workplace

University Medical Center
Tucson, AZ

Wellstart
San Diego, CA

Denver Department of Health and Hospitals
Denver, CO

Community Health Centers, Inc.
Colorado Springs, CO

Georgetown University Hospital
Washington, DC

Florida Department of Health and Rehabilitative Services
WIC and Nutrition Services
Tallahassee, FL

Grady Memorial Hospital
Atlanta, GA

University of Illinois School of Public Health
Chicago, IL

La Leche League International
Franklin Park, IL

American Academy of Pediatrics
Elk Grove Village, IL

Indiana State Board of Health
Maternal and Child Health Division
Indianapolis, IN

Indian Health Service
Rockville, MD

Northern Michigan Hospitals
Petoskey, MI

Community Nutrition Resource Center
Butte, MT

Montana Migrant Council, Inc.
Billings, MT

New Mexico Health and Environment Department
Public Health Division
Santa Fe, NM

Nevada WIC Program
Carson City, NV

New York State Department of Health
Bureau of Nutrition
Albany, NY

Columbia University School of Public Health
New York, NY

Children's Hospital/The Ohio State University College of Medicine
Columbus, OH

Oregon Health Sciences University
Portland, OR

South Dakota Department of Health
Nutritional Services
Spearfish, SD

Children's Nutrition Research Center
Houston, TX

Food and Nutrition Service, USDA
Alexandria, VA

Washington Department of Health and Social Services
Division of Parent/Child Health Services
Olympia, WA

Policies and Guidelines

Sixteen percent (18/113) of respondents reported promoting workplace policies and practices supportive of breastfeeding. These efforts frequently took the form of the issuance of guidelines or recommendations for employers. Two examples of these efforts are described below.

The New Mexico Breastfeeding Task Force has developed workplace recommendations for the support of breastfeeding. These recommendations outline the minimum workplace conditions needed to support breastfeeding as well as additional conditions that help women maximize their parenting and breastfeeding skills.

The Texas Department of Health pledges in its policy statement on breastfeeding to encourage industry to promote and support breastfeeding by providing information on practices that foster a positive environment for the breastfeeding employee.

Surveys and Assessments of Need

Several respondents reported conducting surveys of employers' breastfeeding facilities and policies, while others reported conducting assessments of the need for services for working women. These efforts are outlined below.

The nationwide survey of 900 hospitals conducted in 1988 by the Healthy Mothers, Healthy Babies coalition included questions on what provisions the hospitals made for their own breastfeeding employees. Sixty-two percent of the responding hospitals reported providing facilities for lactating employees. Of these, 83 percent had a place for employees to express breastmilk, 67 percent provided an electric pump, and 86 percent had a refrigerator.

The Nutrition/Breastfeeding Subcommittee of the Connecticut Healthy Mothers, Healthy Babies coalition sent questionnaires to 70 hospitals and health care facilities in order to examine the level of support which these employers provide for women who continue breastfeeding after returning to work. Thirty-eight responses were received. Forty percent of respondents allowed infants to be brought to work to be breastfed, but only one hospital allowed infants to be kept at work all day. Between 30 percent and 40 percent said that extended lunch and flextime hours were available. Day care was provided at 34 percent of the facilities, and at an additional 44 percent provision of day care was being planned. Twenty-six percent of the respondents had a women's lounge. Half of these lounges were private, and 60 percent were smokefree. All facilities had a refrigerator. Additional activities planned by the Nutrition/Breastfeeding Subcommittee include sending breastfeeding packets to the hospitals which participated in the survey and expanding the survey to other types of employers.

The Day Care/Industry Subcommittee of the Indiana State Board of Health's SPRANS breastfeeding promotion project sent surveys to 600 employers in Indiana, and 157 surveys were returned. Thirty-six percent of the respondents provided a refrigerator, 23 percent provided a private space for women to breastfeed or express milk, 10 percent allowed extended breaks for collecting

milk, 7 percent offered flextime, 2 percent provided onsite day care, and less than 1 percent allowed mothers to bring their infants to work or had an electric pump available.

The Oregon Health Sciences University (OHSU) conducted a survey of its employees who returned to work 6 months or less after giving birth, in order to assess the need for facilities and policies allowing working women to continue breastfeeding. As a result of this survey, OHSU has made a room and a breast pump available to its lactating employees.

The Texas Healthy Mothers, Healthy Babies coalition conducted a survey of workplace policies and facilities related to breastfeeding. Questionnaires were sent to 350 employers who had 50 or more employees in central Texas; 37 employers completed the survey. Fifty-nine percent of the respondents provided a refrigerator; 32 percent made flextime, job sharing, or part-time employment available; 24 percent provided a private space for breastfeeding or milk expression; 16 percent provided extended breaks for collecting milk; and 11 percent had onsite day care. None of the employers allowed women to bring their infants to work.

Breast Pump Loan Programs

Three respondents—all WIC State agencies—described breast pump loan programs.

The Indiana WIC program has made breast pumps available to breastfeeding women—including those returning to work—who may benefit from having a pump.

The New Mexico WIC program has purchased 16 electric breast pumps which are available for limited loan to mothers enrolled in the WIC program throughout the State. These pumps are intended for use when there is a critical situation involving separation and/or a medical problem. Working mothers of twins or triplets are eligible to borrow a pump. Other working mothers may also be considered, but they have a lower priority.

The Tennessee WIC program has three breast pump loan programs available to its patients: (1) A manual breast pump program for which sterilization procedures for both the patient and the health department have been developed; (2) portable electric pumps for women whose infants are hospitalized for prematurity or other medical complications; and (3) electric pumps for inhospital use by WIC patients, on permanent loan to the hospitals serving a large caseload of WIC participants.

Model/Demonstration Programs

The Maternal and Child Health Bureau, DHHS, has funded two breastfeeding SPRANS demonstration projects which focused on breastfeeding and the workplace. These projects are described below.

One of the major goals of the Indiana State Board of Health's Breastfeeding Promotion Project was to address the lack of support for breastfeeding mothers in the workplace. As described above in the Surveys and Assessment section, the Day Care/Industry Subcommittee completed an employer survey of support

and facilities available to breastfeeding women. The subcommittee also developed and distributed an educational brochure for employers, *What Does Your Business Have in Common With a Breastfed Baby?*, which outlines steps employers can take to support lactating workers and discusses ways in which support of lactating workers can benefit employers.

Promoting Breastfeeding at the Worksite and in the Neighborhood, a SPRANS project implemented by the National Child Nutrition Project in Philadelphia, sought to increase the incidence and duration of breastfeeding among low-income women who were returning to work or school. Activities included producing educational materials for women, health professionals, child care providers, and employers; developing working parent advocacy committees; and implementing a peer counseling program.

Barriers to Breastfeeding

Problems associated with women's return to work or school soon after giving birth were the most frequently cited barriers to the initiation and continuation of breastfeeding. Sixty-nine percent (58/84) of respondents who listed barriers to breastfeeding cited women's need to return to work and the lack of flexible schedules, maternity leave, and facilities for pumping and storing breastmilk.

Suggestions for Future Activities

Eighteen percent (20/113) of respondents made recommendations related to reducing barriers to breastfeeding in the workplace, including:

- Encourage employers to provide maternity leave, facilities for expressing and storing breastmilk, breaks for breast pumping, flextime, job sharing, onsite day care, and the like.
- Advocate for legislation on issues such as maternity leave and day care.
- Provide education to employers and employees on the importance of breastfeeding and ways to make it possible for working women to breastfeed.
- Provide facilities in State and Federal buildings for breastfeeding and for pumping and storing breastmilk to set an example.
- Set up a model project in a local industry which demonstrates how work and breastfeeding can be combined.
- Involve consumer groups, trade unions, and women's groups in breastfeeding promotion committees and other breastfeeding promotion activities which address the issue of supporting breastfeeding in the workplace, since these groups may have more influence than health professionals on employers.

RESEARCH

Recommendation:

Expand research in human lactation and breastfeeding

ACTIVITIES REPORTED

The 1984 Surgeon General's workshop emphasized the need for research on breastfeeding and human lactation in order to improve knowledge, guide policy, improve strategies, and evaluate programs.

Forty-seven percent (53/113) of the respondents reported being involved in research related to breastfeeding and human lactation. The types of research activities reported focused mainly on social and behavioral factors related to breastfeeding practices, program evaluation, and nutritional and physiological aspects of human lactation. Examples of these reported research projects are described below.

Research on Social and Behavioral Factors

Most of the research reported in this category focused on determining factors which influence the mother's decision to initiate breastfeeding and factors which influence the continuation of breastfeeding. Twenty-five percent (28/113) of respondents reported being involved in social or behavioral research, although only a few projects—outlined below—were described in any detail.

The Department of Family Studies and Consumer Sciences and the School of Public Health's Division of Maternal and Child Health at San Diego State University, California, have conducted a study designed to identify the causes of lactation failure among 10 Hispanic primiparous low-income women. The mothers received one to three indepth, 1-hour assessments, depending upon how long each woman continued to breastfeed. Data was obtained on duration of breastfeeding, initiation of formula supplementation, and introduction of solid foods; maternal attitudes toward infant feeding methods; and maternal perception of social and familial pressures and support related to breastfeeding, bottle feeding, and introduction of solids. Problem areas identified in this study will be used to improve the assessment instrument for clinical use.

As discussed in the third chapter, the Best Start Program is a joint effort by eight Southeastern States to implement a comprehensive campaign of breastfeeding promotion based on social marketing techniques. As part of this project, 35 focus groups were conducted with economically disadvantaged women living in the Southeastern United States in order to determine their attitudes about breastfeeding. It was found that factors that attracted women to breastfeeding included the desire for a special, close relationship with the baby,

and the health benefits of breastmilk. Barriers to breastfeeding included embarrassment, lack of confidence, loss of freedom and lifestyle restrictions, and the return to work or school.

Determinants of Infant Feeding: Breast vs. Bottle, a SPRANS-funded study conducted from 1986 to 1988 at the Johns Hopkins School of Hygiene and Public Health, analyzed the major determinants of infant feeding behavior in new mothers. Women enrolled in the study were contacted by telephone or in person, once during the prenatal period and three times during the postpartum period. The study of women who prenatally stated an intention to breastfeed identified four variables that were significant predictors of failure to breastfeed for more than 7 days: (1) lack of confidence in ability to breastfeed, (2) less certainty in the decision to breastfeed, (3) delayed first breastfeeding, and (4) not having the baby rooming-in. The study also found that, while planning to be employed within 6 months postpartum did not affect breastfeeding incidence rates, actually being employed during that time period had a negative affect on breastfeeding duration rates.

Cornell University Cooperative Extension is conducting a study on the infant feeding decisions of low-income women. The project is designed to elucidate the complex interrelationships existing among personal, social, and cultural factors that influence women's infant feeding expectations and decisions. Women's learning philosophies will also be studied to understand how they influence both learning about breastfeeding and infant feeding practices. The research will be conducted through indepth, open-ended, personal interviews with 50 low-income, nulliparous pregnant women ages 18 years and older.

The goals of Acculturation, Psychosocial Predictors, and Breastfeeding, a SPRANS-funded study at the University of Texas Medical Branch at Galveston, are to identify the reasons mothers from the United States-Mexico border population choose to breastfeed, to determine factors important to the maintenance of breastfeeding, and to study infant health and nutritional status as a function of breastfeeding. A number of psychosocial variables will be measured to assess their importance in the initiation of breastfeeding, and these data will be analyzed within ethnic groups by degree of acculturation.

Program Evaluation

Program-related research—monitoring and/or evaluating a program's breastfeeding intervention strategy to determine its effectiveness—was reported by 20 percent (23/113) of respondents. Two examples of these research activities are described below.

The USDA's WIC Breastfeeding Promotion Study and Demonstration evaluated the implementation of selected breastfeeding promotion approaches at seven WIC local agencies. These approaches included three major components: (1) A special group, such as a task force or committee, which coordinated breastfeeding promotion and support activities for WIC participants; (2) a prenatal component addressing participants' concerns and lack of knowledge about breastfeeding, and incorporating positive peer

influence; and (3) an in-hospital/postpartum component providing support after birth. These demonstration projects are described in detail in the two-volume set, *WIC Breastfeeding Promotion Study and Demonstration: Phase IV Report* (see appendix E, page 79).

Operation Breastfeed, a research project conducted by the Texas Department of Health, is designed to increase the number of participants in the WIC program who are breastfeeding at 6 weeks postpartum and to measure the impact of nutrition education on the decision to breastfeed. Activities include surveys of pregnant and postpartum participants on their attitudes regarding breastfeeding, monthly nutrition education classes for pregnant and lactating women which emphasize breastfeeding, and breastfeeding support for new mothers.

Nutritional and Physiological Research

Thirteen percent (15/113) of respondents reported engaging in nutrition research, and 9 percent (10/113) reported involvement in physiological research related to breastfeeding and human lactation. Nutrition research reported was related to the nutritional needs of lactating mothers, the nutritional status of breastfed babies, and the nutrient composition of breastmilk. Physiological research reported was focused on the factors related to the production of breastmilk; the ability of the infant to utilize breastmilk; the transmission of infectious diseases, drugs, and alcohol through breastmilk; and the immunological impact of breastmilk on the infant. Two examples of these research efforts are described below.

The purpose of the research program at the Children's Nutrition Research Center (CNRC) in Texas is to define the nutritional requirements that will ensure the health of pregnant and lactating women and their infants. The CNRC has conducted numerous nutritional and physiological studies, including research on infant nutrition and growth and on breastmilk composition. The CNRC is funded in part by the USDA's Agricultural Research Service.

Federal agencies within the Department of Health and Human Services and the Department of Agriculture have funded a variety of studies related to human lactation. The Maternal and Child Health Bureau, DHHS, funds research projects related to breastfeeding through its SPRANS grants, many of which have been described in this report. The National Institutes of Health, DHHS, primarily through the National Institute of Child Health and Human Development, supports numerous research projects related to the physiology of lactation, maternal and nutritional aspects of lactation, infant physiology and nutrition related to lactation, immunological aspects of lactation, effects of environmental exposures on human milk, and the composition of human milk (see appendix K, page 112). Research on human lactation and breastfeeding supported by the U.S. Department of Agriculture has also focused on maternal nutrition and infant nutrition and on developmental aspects related to lactation (see appendix L, page 115).

Suggestions for Future Activities

The Institute of Medicine's study, *Nutrition During Lactation* (described in the second chapter), assessed current research on the nutritional needs of lactating women, and recommended the following topics in need of further research: (1) the development of indicators of nutritional status for lactating women; (2) identification of groups of lactating women in the United States who are at nutritional risk or who could benefit from nutrition intervention programs; and (3) the effects of maternal diet and nutritional status on milk volume, milk composition, maternal health, and infant nutritional status, growth, and health.

Data Collection

Data collection is a very important part of monitoring the Nation's progress toward the achievement of the year 2000 health objective for breastfeeding. One of the strategies proposed in the 1984 *Report of the Surgeon General's Workshop on Breastfeeding and Human Lactation* was to develop a national data base on the initiation and duration of lactation. To followup on this particular strategy, survey respondents were asked to describe any data collection activities they undertook in order to monitor breastfeeding rates and to include the definition(s) of breastfeeding which were used. Fifty-two percent (59/113) of respondents answered this data collection question.

Definitions of Breastfeeding

Fifty-nine percent (35/59) of respondents who answered this data collection question included a description of the definition of breastfeeding which was used. Definitions varied widely, as did the time at which the assessment of feeding method was made. "Ever breastfed for any duration and frequency" was the most commonly reported definition of breastfeeding (37 percent, or 13/35). Other definitions reported include: "breastfed one or more times per day" (29 percent, 10/35); "partially breastfed, with infant formula supplementation" (23 percent, or 8/35); "exclusively breastfed" (6 percent, or 2/35) ; and "nurse's determination of infant feeding method at the hospital after delivery" (6 percent, or 2/35).

In April 1988, the Institute for International Studies in Natural Family Planning (now the Institute for Reproductive Health) at Georgetown University, with support from the United States Agency for International Development (USAID), moderated a meeting of the Interagency Working Group on Breastfeeding in Washington, DC. The goal of this meeting of national and international health and development agencies was to develop a simple means of presenting definitions and types of information essential to accurately describe breastfeeding practices throughout the world. The breastfeeding definitions developed are based on frequency of breastfeeding episodes, usual length of time for each feeding, and amounts of other foods or liquids given (see figure 5).

Data Collection Activities

Forty-two percent (47/113) of respondents indicated that they collected data on the incidence of breastfeeding, while only 24 percent (27/113) reported

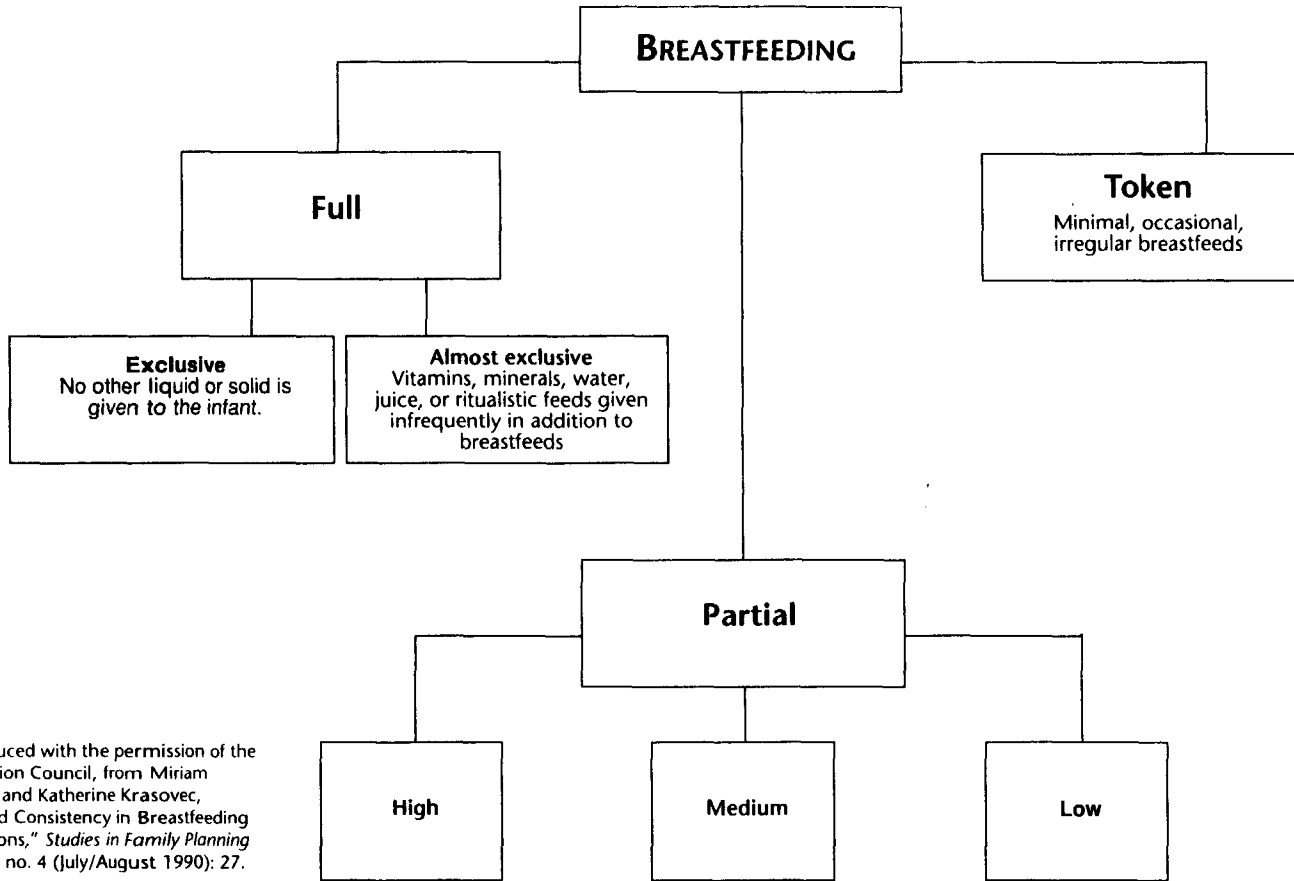

Figure 5—Schema for breastfeeding definition

Reproduced with the permission of the Population Council, from Miriam Labbok and Katherine Krasovec, "Toward Consistency in Breastfeeding Definitions," *Studies in Family Planning* Vol. 21, no. 4 (July/August 1990): 27.

collecting data on the duration of breastfeeding. For the most part, the maximum length of time for which breastfeeding duration was tracked by the respondents ranged from 2 weeks to 6 months postpartum, although some research projects tracked their subjects through the first year of the infant's life.

The types of data collection activities undertaken differed widely among respondents (see figure 6). The most commonly reported activity was collecting data on participants in the WIC program (36 percent, or 17/48). Data collection activities for the Centers for Disease Control (CDC) Surveillance Systems were also frequently cited (24 percent, or 11/48) by respondents. These CDC-related data collection activities are described in more detail below. Other forms of data collection reported include data collection for research purposes, documentation of infant feeding method at hospital discharge, documentation of infant feeding method on newborn metabolic screening forms in the hospital, and collection of data for statewide data systems. Brief descriptions of some of the reported breastfeeding data collection activities follow.

National Data Collection Activities

In order to compile the required report entitled *Biennial Report to Congress on the Characteristics of Participants in the Special Supplemental Food Program for Women, Infants, and Children,* the Food and Nutrition Service collects statistics on WIC programs and program participants, including some information on breastfeeding rates. The Food and Nutrition Service does not *require* States to collect and submit data on breastfeeding incidence and duration, but breastfeeding incidence and duration data have been designated optional items

Figure 6—Breastfeeding data collection activities reported by respondents (N=48)