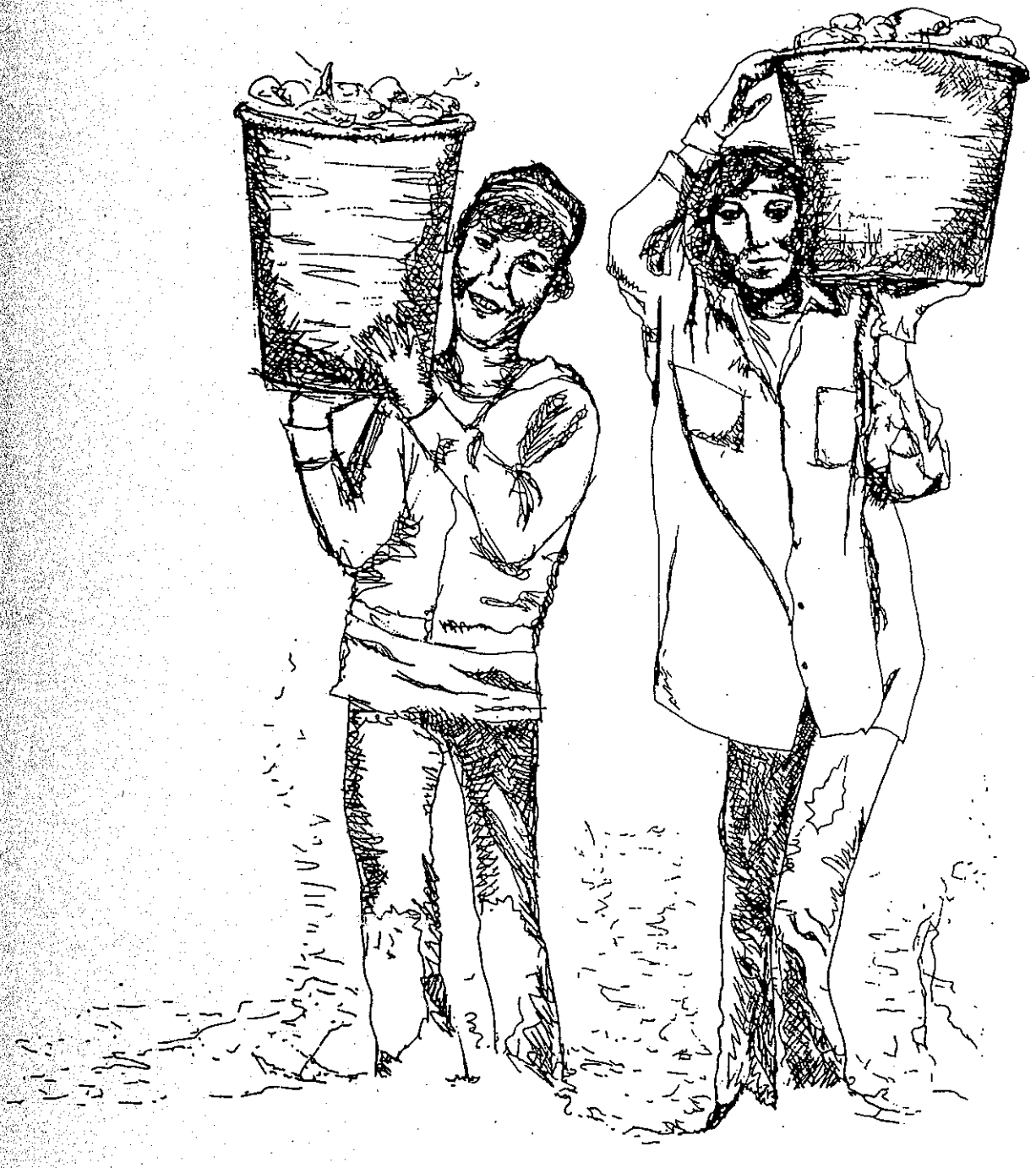
Migrant Lay Health Advisors:

A Strategy For Health Promotion



A Program Evaluation

Final Report

Prepared with funds provided by:
The Department of Health and Human Services
Bureau of Maternal and Child Health
and Resources Development
SPRANS Grant #3736003

Cover Design by Toni M. Griffin

"Migrant Lay Health Advisors: A Strategy for Health Promotion"

Final Report

Project MCJ 3736003

Elizabeth Watkins, MSSA, DSc, Director
Kim Larson, BSN, MA, Project Coordinator
Christina Harlan, BSN, MA, Coordinator of Training
Eugenia Eng, MPH, DrPH, Consultant
Sherry Wenrich, AA, Data Manager
Stuart Gansky, BSPH, Statistical Research Assistant
Wilda Jaffet, Interviewer
Janeice Burnette, Secretary

Department of Maternal and Child Health
School of Public Health CB# 7400
University of North Carolina
Chapel Hill, NC 27599
(919) 966-5979

May 16, 1991

ABSTRACT OF FINAL REPORT

Project Title and Number: "Migrant Lay Health Advisors: A Strategy for Health Promotion", MCJ-376003

Grantee: Department of Maternal and Child Health, School of Public Health, University of North Carolina at Chapel Hill

Project Period: 10/1/87-9/30/90

Project Director: Elizabeth L. Watkins, D.Sc.
Department of Maternal and Child Health
School of Public Health CB# 7400
University of North Carolina
Chapel Hill, NC 27599-7400
(919) 966-5979

PURPOSE OF PROJECT: The purpose was to improve health status and to increase utilization of perinatal and child health services within the migrant farmworker population in North Carolina. Utilizing theory of social support systems as mediators of the effects of health problems, project staff trained lay health advisors (LHAs) to expand mothers' knowledge of practices of maternal-child care and community resources. Approximately 80,121 migrant and 417,131 seasonal farmworkers and dependents are employed in North Carolina annually. They include Hispanic, white, black, and Haitian ethnic groups, with Hispanics representing more than 80% of the maternal and child health population. Major health problems facing the migrant population include poor perinatal outcomes and high rates of infant morbidity. Migrant health centers and local health departments are important resources for care. There is increasing interest nationwide in using LHAs to bridge the cultural distance between consumer and provider and help migrant farmworker families access several sources of care.

GOALS AND OBJECTIVES: The project goal was to improve the perinatal and infant outcomes among migrant families receiving care in North Carolina between October 1, 1987 and September 30,1990 through the use of lay health advisors.

1. Program Intervention Objectives

   a. Training of lay health advisors at the intervention sites will increase their knowledge regarding maternal and child health practices and community resources.

b. Pregnant women and mothers of infants enrolled at the intervention sites will have an increase in level of knowledge in regard to maternal and child health practices and use of community resources as a result of interaction with lay health advisors.

c. Training of lay health advisors at the intervention sites will increase social support provided to pregnant women and mothers of infants.

d. Pregnant women and mothers of infants at the intervention sites will report increased levels of social support received from lay health advisors.

2. Process Objectives/Health Practices

a. Women who enroll for prenatal care at the intervention sites are more likely to: obtain adequate prenatal and postpartum care, carry their medical records, receive an annual Papanicolaou test, and choose a family planning method than women who enroll for prenatal care at the control sites.

b. Mothers who enroll their infants for pediatric care at the intervention sites are more likely to bring their infants for the standard number of well child visits and to carry their infant's medical record than mothers who enroll their infants for pediatric care at the control sites.

3. Outcome Objectives/Health Status

a. Women who enroll for prenatal care at the intervention sites will deliver fewer low birthweight infants than women who enroll for prenatal care at the control sites.

b. Infants who enroll for pediatric care at the intervention sites will have fewer illnesses and injuries during the first year of life than infants who enroll for pediatric care at the control sites.

METHODOLOGY:

Study design. A quasi-experimental longitudinal design with pre and post non-equivalent comparison groups was used. The intervention sites were a satellite clinic of a county health department and a migrant health center. The control sites included a combination of a community health center and a county health department as well as another migrant and community health center. Data collected in 1988 was used as a baseline and 1989 was the experimental year.

Intervention. Hispanic migrant farmworker women identified as natural helpers (LHAs) were trained in women's health, child health, nutrition, and use of community social services. A total of 40 LHAs completed the training and the Knowledge Test and Helping Contacts Questionnaire were administered to 20 trained in 1989.

Sample size. Because of the mobility of the target population, a population approach was used in 1989 in administering pre and posttests of a Knowledge Test to 224 Hispanic prenatal patients and mothers of infants at control and intervention sites, and the Exposure Questionnaire to 326 similar women at the intervention sites. The case method was used in collecting data on health status and health practices of all ethnic groups from medical records and other sources. There were 613 women receiving prenatal care between October 1, 1987 and December 31, 1989, and their newborns which included 202 single births. There were 186 infants from birth to 12 months of age whose mothers did not receive prenatal care while enrolled as a project participant. Infants were enrolled between 10/1/87 and 12/31/88. Results of the project are presented only in relation to the Hispanic population. There were 519 Hispanic pregnant women, 185 Hispanic newborns, and 160 Hispanic infants.

RESULTS AND IMPLICATIONS:

Intervention. Results indicate that the LHA model is efficacious for a primary care center to conduct. Pre and posttests of the Knowledge Test revealed a significant increase in the LHA's level of knowledge after the training sessions. Sixteen of the 20 LHAs trained in 1989 reported an average of 3.25 helping contacts during a two-week period. The target population did not demonstrate a significant change between pre and posttest scores on the Knowledge Test, but this was measurement of change in populations, not individuals. Forty-two women (13%) responding to the Exposure Questionnaire reported an average of 3.1 helping contacts with the LHAs.

Health Practices. There was an observed change of a higher proportion of women at the intervention sites in 1989 initiating prenatal care in the first trimester of pregnancy than in 1988 whereas the proportion of women at the control sites who made their first prenatal visit in the third trimester increased. Approximately 47% of the women in the 1988 cohort who had a livebirth made the recommended nine or more visits. There was not a significant difference between control and intervention sites in regard to this variable nor an increase in 1989 in the proportion making the recommended number of visits. There was not a significant increase in the proportion of women returning for postpartum care, receiving a PAP test,

or carrying medical records. Over 90% of women in both cohorts selected a method of contraception when they made their postpartum visit. Only a small percentage of the newborns and infants made the recommended number of well child visits. Differences between intervention and control sites were not significant. In 1988 the proportion (29%) of mothers whose child received care at the intervention sites and who carried their childs record was significantly higher than the proportion (12%) at the control sites.

Health status. There was an observed but not significant increase in the proportion of prenatal patients at the intervention sites who had normal hematocrit or hemoglobin levels. The percentage of low birthweight newborns and infants at the control sites decreased from 2% in 1988 to zero in 1989. The percentage at the intervention sites decreased from 7% to 5%. These changes were not statistically significant. Data regarding immunization status, incidence of illnesses and injuries, and frequency of sick and well child visits were analyzed across age bands. There was no significant difference between control and intervention sites or between cohorts in regard to these variables. In 1988 a significantly higher proportion of newborns were adequately immunized than were infants. A significantly higher proportion of newborns and infants at the control sites made sick visits than did those at the intervention sites. There was a significant increase in the proportion of a combined sample of newborns and infants at the intervention sites with normal hematocrit or hemoglobin levels from 33% in 1988 to 53% in 1989.

PUBLICATIONS AND DISSEMINATION OF RESULTS: A preliminary report of the project was distributed as a resource guide at the 1990 Annual Migrant Health Meeting. Staff made presentations regarding the project at state and national meetings; provided consultation on state, national and international levels; and taught graduate students in the health professions.

FUTURE PLANS: Study sites are continuing LHA programs. It is recommended future studies use methods to measure individual rather than population change in regard to knowledge of health practices and contacts with LHAs. Also, duration of project should be extended to permit a longer time in which behavior change could occur.

Table of Contents

Acknowledgements

The Maternal and Child Health Migrant Project could not have been successful without the collaboration of five North Carolina health care agencies serving migrant and seasonal farmworkers and their families. The project would like to thank the administrators and staff of: Tri-County Community Health Center, Nash County Health Department, Duplin County Health Department, Goshen Medical Center, and Blue Ridge Health Center.

We are grateful to faculty and staff in the Department of Biostatistics, University of North Carolina, School of Public Health, who provided consultation, data management, and data analysis. Encouragement and support for the project, from the Division of Maternal and Child Health and the Division of Adult Health, was helpful in maintaining a link between the North Carolina Department of Environment, Health, and Natural Resources and the migrant health centers.

The following programs provided tangible services in the implementation of the Project's Lay Health Advisor Program: East Coast Migrant Health Project, the Episcopal Migrant Ministry program, and the East Coast Migrant Head Start Project (delegate agencies: Shiloh Child Development Center and St. James Child Care Center).

The term "lay health advisor" was adopted from the work and writings of Dr. Eva Salber (Service and Salber, 1979).

Project staff would especially like to thank the migrant women who participated in the program.

I. Purpose of the Project

A. Purpose

In 1987 the Department of Maternal and Child Health, University of North Carolina School of Public Health, received a three-year grant from the Maternal and Child Health Bureau, Department of Health and Human Services, to assess the effectiveness of lay health advisors. Using the concept of social support systems as mediators of the effects of health problems, project staff trained migrant farmworker women as lay health advisors to expand mothers' knowledge and practices of maternal-child care and community resources. The purpose was to improve health status and to increase utilization of perinatal and child health services within the migrant farmworker population in North Carolina. The project used a quasi-experimental design involving five health care agencies at four sites. Two sites were used as intervention sites and two as control. This document describes the methodology and results of the project.

The project was developed as a result of experiences with the training of lay health advisors during the implementation of SPRANS grant MCJ 373415 "Improving the Health of Migrant Mothers and Children," which was conducted by the Department of Maternal and Child Health between 10/1/84 and 9/30/88. The lay health advisor program was one component of the SPRANS grant to improve quality of care using a multidisciplinary team located at one migrant health center. The lay health advisor program was perceived as a valuable service for farmworkers and health care agencies. Consequently, the current project was developed in order to provide systematic documentation of the impact of lay heath advisors on the health status of the migrant population.

B. Needs and Problems

There are an estimated 3 million migrant and seasonal farmworkers and their dependents in the United States. The population of the east coast migrant stream is predominately Hispanic and Black American with small numbers of whites, Haitians, and Native Americans. North Carolina receives more migrant farmworkers than any other east coast upstream state owing to its long growing season and size of area devoted to agriculture. An estimated 80,121 migrant and 417,131 seasonal farmworkers, including dependents, are employed in the state annually (Garrett, and Schuman, 1988). Similar to the rapidly increasing Hispanic population overall in the U.S., the migrant farmworker population is increasingly more Hispanic. For example, the percentage of Hispanic women in the population receiving prenatal care at the Tri-County Community Health Center in North Carolina increased from 45 percent in 1982 to 85 percent in 1988 (SPRANS Projects 373415 and 336003).

A major health problem facing the migrant population in the United States is poor perinatal outcome. A survey of Mexican migrant women in Wisconsin documented obstetrical histories of frequent, closely spaced pregnancies with high rates of fetal and neonatal loss and low birthweight ($\leq$ 2500 grams) (Slesinger, 1979). A closer examination of mortality rates in that study found the migrant infant mortality rates were 29/1,000 livebirths which was more than twice that of the U.S. infant mortality rate. The first North Carolina project showed high rates of infant morbidity with such illnesses as meningitis, seizures, pneumonia, burns, and dehydration (SPRANS Grant 373415).

Migrant farmworker mothers and children infrequently utilize primary care services. Migrant women make fewer prenatal visits than the standard, and are less likely to use family planning methods (Smith, 1983; Littlefield, 1986). Slesinger found that 22 percent of the children less than three years old had never received a physical examination when well. Another study of Mexican immigrant children indicated that less than half had seen a health care provider

by age 15 (Guendelman, 1985). The North Carolina study found that only 51% of the children ages 0-5 years were adequately immunized against childhood illnesses.

Dissimilarities in language, cultural background, level of education, and health beliefs and practices all contribute to the possibility of poor communication between provider and client (Quesada, 1976; Hingson, 1974; Marcos, 1981). In addition, the life-style of migrant farmworkers involves frequent moves and isolation from health resources. This often results in fragmented or discontinuous contact with the health care system. The lack of a consistent relationship with a particular health care provider may lessen the likelihood of accessing primary care services.

C. Significance of the Project

The Migrant Health Program, administered by the Division of Primary Care Services, Bureau of Health Care and Delivery Assistance, is an important resource for funding of health services for migrant and seasonal farmworkers and their dependents. It provides funds for migrant health centers in high impact areas where there are 4,000 or more migrant farmworkers. It gives funds to public and non-profit organizations for provision of health services in areas where the number is less than 4,000. In 1990 there were 105 centers in 34 states and Puerto Rico. The Migrant Health Program Strategic Work Plan for 1989-91 states that the migrant health centers are serving approximately 17% of the target population. This means that the majority of migrant and seasonal farmworkers and their families are utilizing usual health care providers, such as county health departments, private providers, or hospital emergency rooms.

Both the Division of Primary Care and the Maternal and Child Health Bureau, which administers the Title V Maternal and Child Health Services, are concerned with the problems of high rates of low birthweight and infant mortality in the United States. There is a need for programs funded by these two agencies to work closely together on federal, state, and local levels in order to improve the quality of care for migrant farmworker mothers and children. In North

Carolina Title V funds are administered by the Division of Maternal and Child Health in the Department of Environment, Health and Natural Resources (DEHNR). The Division distributes funds to the county health departments for provision of services for maternal and child health and children with special health needs. In some counties there is fragmentation of care received by migrant farmworker women and children between the county health departments and migrant health centers. For example, in this study, women residing in Duplin and Sampson counties received their prenatal care at the respective county health departments and their well child care at the migrant health centers.

The Migrant and Refugee Health Program (MRHP) in the Division of Adult Health in DEHNR also allocates funds to county health departments in areas with less than 4,000 migrant population. It has contracts with 13 counties for provision of general health services to migrant farmworkers. In addition it has contracts with three counties for employment of a Migrant Health Technician to provide outreach and referral services. Two more technicians are employed directly by MRHP. Many county health departments designate a staff member as Migrant Health Nurse Liaison without special funding.

Peer counselors are envisioned as bridging the cultural distance between consumer and provider and empowering women to manage the securing of their family's health care from several sources. For this reason, the federal agencies of the Division of Primary Care and the Maternal and Child Health Bureau have become interested in the efficacy of lay support systems to overcome barriers to care (Heins, 1987; Giblin, 1989). Evaluation efforts have tended to be subjective. The innovative approach of this current project attempted to provide both qualitative and quantitative evaluation of a lay health advisor program. It assessed the quality of the lay health advisor program by measuring increase in knowledge on the part of the lay health advisors and the target population. It measured the number and content of contacts between lay health advisors and women of childbearing age utilizing the health centers. Change in health status of

prenatal patients, newborns, and infants as well as modification of health behaviors of mothers was quantitatively measured. Dissemination of information about the project has led to nationwide inquiries for details on procedures and evaluation tools. Increased interest in peer counseling and home visiting as methods of improving the quality of prenatal care and perinatal outcomes has brought regional and national recognition to this project regarding the use of lay health advisors.

II. Goals and Objectives

A. Goals

The project goal was to improve the perinatal and infant outcomes among migrant families receiving care in North Carolina between October 1, 1987 and September 30, 1990 through the use of lay health advisors.

B. Objectives

The project sought to achieve this goal through the following objectives:

1. Program Intervention

   a. Training of lay health advisors at the intervention sites will increase their knowledge regarding maternal and child health practices and community resources.

   b. Pregnant women and mothers of infants enrolled at the intervention sites will have an increase in level of knowledge in regard to maternal and child health practices and use of community resources as a result of interaction with lay health advisors.

   c. Training of lay health advisors at the intervention sites will increase their provision of social support to pregnant women and mothers of infants.

   d. Pregnant women and mothers of infants at the intervention sites will report increased levels of social support received from lay health advisors.

2. Process Objectives/Health Practices

   a. Women who enroll for prenatal care at the intervention sites are more likely to: obtain adequate prenatal and postpartum care, carry their medical records, receive an annual Papanicolaou test, and choose a family planning method than women

who enroll for prenatal care at the control sites.

b. Mothers who enroll their infants for pediatric care at the intervention sites are more likely to bring their infants for the standard number of well child visits and to carry their infant's medical record than mothers who enroll their infants for pediatric care at the control sites.

3. Outcome Objectives/Health Status

a. Women who enroll for prenatal care at the intervention sites will deliver fewer low birthweight infants than women who enroll for prenatal care at the control sites.

b. Infants who enroll for pediatric care at the intervention sites will have fewer illnesses and injuries during the first year of life than infants who enroll for pediatric care at the control sites.

III. Methodology

A. Study Design

This project was based on a lay health advisor (LHA) training program first implemented at a migrant health center in North Carolina between 1984 and 1987. The current demonstration project applied a social support model to several settings of health care delivery, i.e., a county health department and a community health center. The evaluation used a quasi-experimental longitudinal design with pre and post non-equivalent comparison groups.

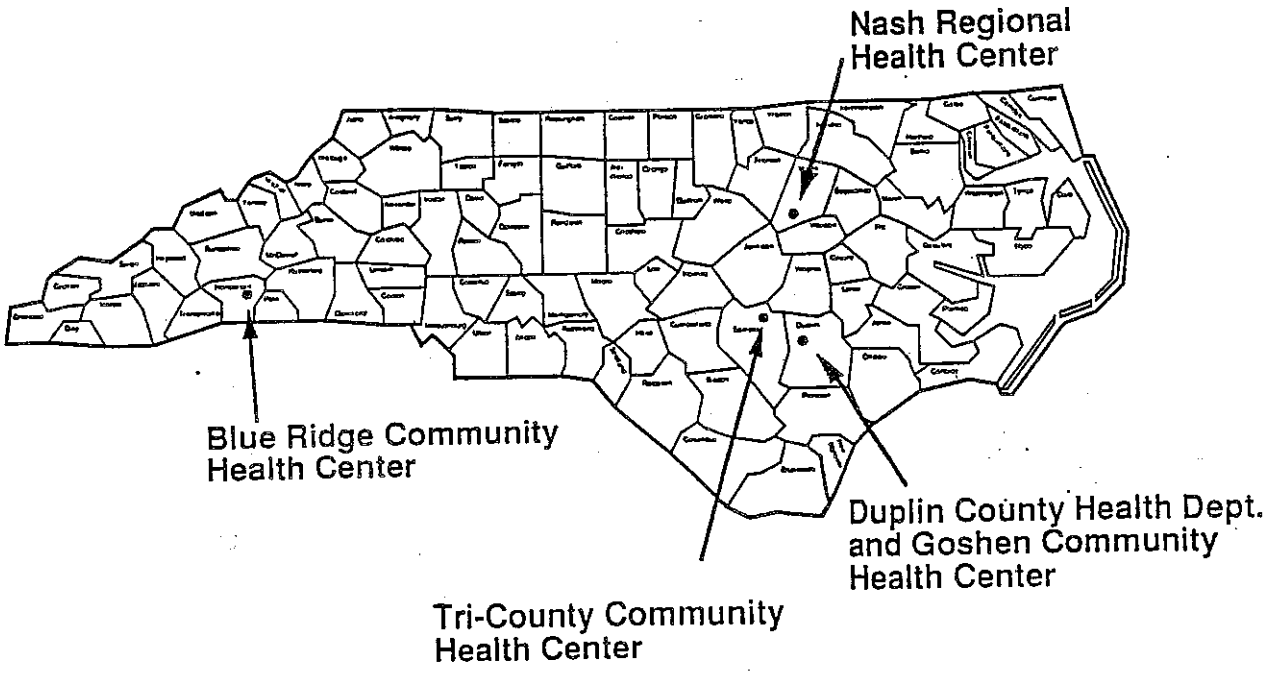
One assumption of the project was that the training of LHAs to strengthen the social support they provide to other women would increase the LHAs' knowledge of accepted health behaviors and expand their ability to convey this knowledge through naturally existing social networks to other migrant farmworker women. Another assumption was that, through supportive interactions with LHAs, migrant mothers would increase their utilization of preventive health services with resulting improved pregnancy outcomes and health status of infants.

The project was administered by the Department of Maternal and Child Health at the University of North Carolina School of Public Health. Project staff included the director (a faculty member in the Department of Maternal and Child Health), a project coordinator (bilingual public health nurse), a training coordinator (tri-lingual public health nurse) and a data manager. A bilingual field interviewer was added to the staff during the second year to collect specific health behavior information. A member of the faculty of the Department of Health Behavior and Health Education served as a consultant to the project. The Biometric Consulting Laboratory provided consultation on statistical and data processing services.

The five target health care agencies in North Carolina which served the largest proportion of the migrant and seasonal farmworker population were selected to carry out the project's objectives. The Nash Migrant Health Center (NMHC), a satellite clinic of the Nash County

Health Department, serves migrant farmworkers in Nash and Wilson counties. Tri-County Community Health Center (TCCHC), a migrant health center, serves migrant farmworkers in Sampson, Johnston, and Harnett counties. Goshen Medical Center (GMC), a community health center, serves migrant farmworkers in Duplin county. The Duplin County Health Department (DCHD) provides the prenatal care for migrant women in that county. Blue Ridge Health Center (BRHC; formerly Migrant Family Services), a migrant and community health center, serves migrant farmworkers in Henderson county (Figure 1). During the peak agricultural season there are approximately 44,000 migrant farmworkers in these counties.

Figure 1. Location of Study Sites



One migrant health center and one county health department served as intervention sites, while a different migrant health center and a combination community health center/health department served as control sites (Figure 2).

Figure 2. Model of Study Design

Target of LHA Intervention: Prenatal Patients and Mothers of Infants

Experimental Sites (NMHC and TCCHC)

Baseline (pretest)	LHA intervention	Change in behavior (posttest)	Change in health status of prenatal patients, newborns, and infants

Control Sites (EMC/DCHD and BRHC)

Baseline (pretest)	No intervention	No change in behavior (posttest)	No change in health status of prenatal patients, newborns, and infants

B. Intervention

In the past decade, there have been studies examining the role of lay support systems in mediating the effects of health problems. There is particular interest in the lay support system of migrant farmworkers because of the mobility of this population group. Family, friendship, and work-related networks are examples of attachments among migrant farmworkers, or between individual farmworkers and groups. These ties serve to improve adaptive competence in dealing with short-term crises as well as long-term challenges and stresses. Lay support systems have the same ostensible goal in promoting the well-being of their members as do agencies in securing the well-being of their clients. Various notions are current about how lay support systems and the professional service delivery system should relate to each other to improve health outcomes.

Some acknowledge the separateness of the two systems, but observe that they may nevertheless interface in important ways by engaging in free communication, collaborating at times, and supplementing each other's services. Others go further in observing that the existence of lay support systems is testimony to the failure of agencies in providing certain types of services. However, in commentaries on professional-lay relationships, a collaborative model predominates. One widely held view is that, since lay support systems constitute a part of the larger array of human services, professionals should be prepared to recognize a valid role for them. Others suggest that the relationship between professional and lay helping systems can be strengthened through the promotion of "natural helping networks" that would lead to more accessible and more comprehensive help for people in trouble.

Such natural helpers are lay people to whom others customarily turn for advice, emotional support, and tangible assistance (Levin, 1983). The nature of the support they provide is informal and spontaneous -- so much a part of everyday life that it often goes unrecognized. Among migrant farmworkers, these natural caregivers provide day care for young and old; advice on health, family, personal, and financial matters; and assistance in making connections between people in their network. They match needs with resources, arrange for rides or translation, and refer women to agencies. Natural helpers are most often characterized as migrant women who are respected and trusted, who are interested in learning more about their life circumstances and ask questions, and who are responsive to the needs of others by sharing what they know.

The social support provided by natural helpers can be defined using a typology of four broad kinds of supportive behaviors or acts (Israel, 1988):

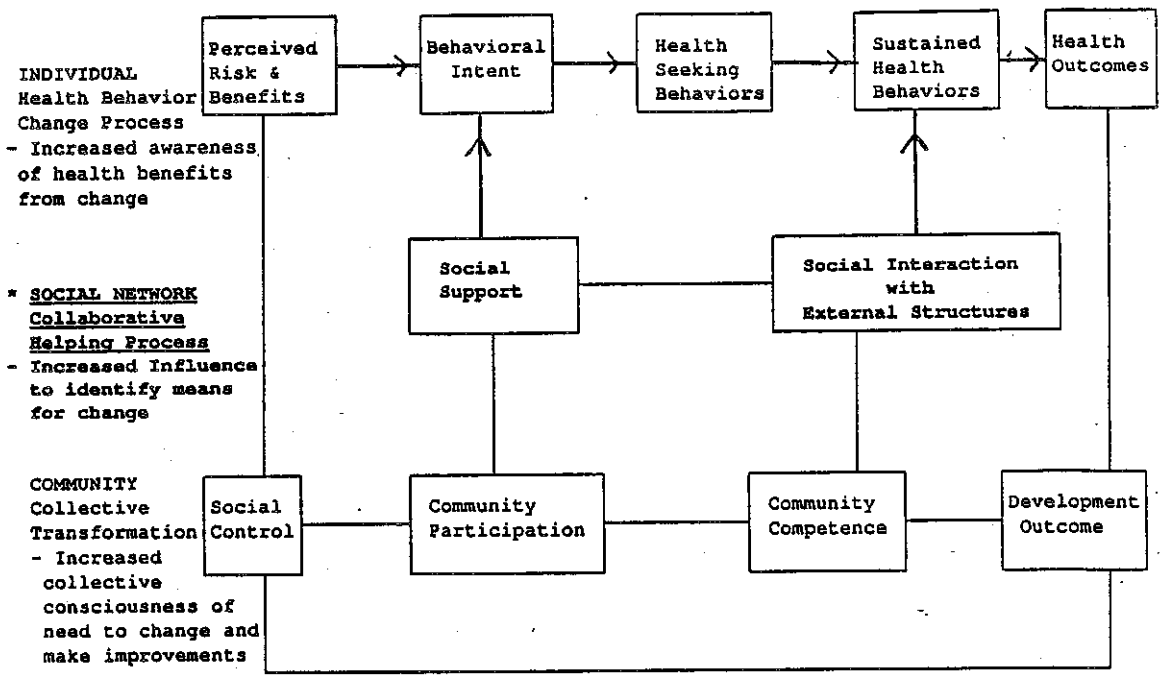
1. Emotional support - esteem, affect, concern, listening
2. Instrumental support - tangible aid in labor, money, time
3. Informational support - affirmation, feedback, social comparison
4. Social outreach - access to external social contacts and resources

Recruiting and training natural helpers to link their support functions more directly to health promotion and disease prevention is an approach for strengthening already existing ties among migrant farmworkers. In the case of no preexisting ties, then another approach may be warranted, such as developing new network linkages (e.g., self-help groups). However, observations from the field indicate, not only that lay support systems are often the most important resources for migrant women and children, but also that a number of women provide social outreach by linking individuals in need of services. Thus, a more comprehensive approach is to strengthen the ties between the lay and formal caregiving systems by developing the roles of lay health advisors among natural helpers from as many social networks as possible.

There are two key points to recognize in using the LHA approach among migrant women. First, the extent to which the provision of formal services by an agency are considered a part of an individual's supportive network will be identified by the individual herself. This may imply that the provision of formal services does not meet the needs of the individual, but also may imply that services are considered by the individuals themselves as being separate from the support functions of their network. Second, network ties may not all be supportive. Therefore, in the development and implementation of a LHA program, strategies need to be considered that minimize the potential negative effect of these ties.

In general, the selection of strategies for a LHA approach to health promotion can be based on the level of the desired outcome: (1) behavior change, (2) organization change, and (3) community change. Inherent to the definition of health promotion is the need for multiple levels of change, and consequently a program using multiple strategies. Given the outcome objectives of the project, a behavior change strategy (increased utilization of MCH services) and an organization change strategy (improved continuity of care) were needed (Figure 3).

Figure 3. Lay Helping Conceptual Model



* The Lay Health Advisor Program was developed to intervene at the level of Social Network. Through social support interaction with the health care system, LHAs can impact on individual health behavior change and the collective consciousness of the larger network.

In order to implement behavior and organization change strategies, the role of project staff included: initiating the process of identifying and selecting natural helpers, serving as a consultant to natural helpers, conducting training, providing a link between the natural helpers and professionals in other agencies, and facilitating the various phases of the program.

An important component was the identification of the natural helpers. This process began with staff establishing a set of criteria that described the characteristics and type of person who could carry out the program's selected strategies. Qualities sought in the women were leadership ability, attitudes of empathy and caring, interest in learning more about the health of themselves and their children, and an understanding of the importance of sharing that knowledge with family and friends. The women were not intended to be provider-extenders and, therefore, it was not

required that they be bilingual, have a high school education, or drive a car in order to participate. Payment was not offered for participation in the program.

The next step was to identify natural helpers using the "reputational method." The professional staff conducted a series of open-ended interviews within the project sites asking for names of people who fit the criteria. Women were selected from the Hispanic population since it represented the largest ethnic group among migrant farmworker families in North Carolina. Clinic staff, Migrant Head Start staff, and outreach workers recommended women for inclusion in the program. Previously trained lay health advisors also referred women. The final selection was based on women's motivation and interest in the program.

To elicit their agreement to participate, it was critical that staff describe in concrete terms the LHA tasks of helping and sharing their new knowledge with other women. The program focused on prenatal, infant, and women's health problems. The root causes of these problems, such as, poverty, inadequate housing, environmental hazards, and racism, are often beyond any one LHA's ability to control. These issues were discussed in the context of increasing community competence whereby, as a group, LHAs consider their respective networks as means to increase collective consciousness regarding the need to change and make improvements (Cottrell, 1976). Outcomes from raising the LHAs' critical consciousness are part of a long-term vision (Freire, 1973).

The training programs were held at locations convenient to the women, such as, the migrant health center, the Migrant Head Start center, migrant camps, and a local church facility. Two of the delegate agencies of the East Coast Head Start Project, Shiloh Child Development Center, located in Johnston County, and St. James Child Care Center in Nash County, collaborated with project staff in carrying out the lay health advisor program. The Episcopal Migrant Ministry program provided transportation and space for conducting sessions. Project staff were assisted by two outreach workers placed at the intervention sites through the East Coast

Migrant Health Project. Their role was mainly one of identifying women interested in the program, and assisting with transportation and child care. Project staff recruited the women, coordinated the program, and facilitated the sessions. While on the average 18 hours of training were conducted, the number of sessions and time period varied according to the preferences of each LHA training group.

The training program covered information on the following topics:

Women's Health:	BSE, Pap Test, STDs, AIDS[1] Family Planning Pregnancy and Childbirth
Child Health:	Well Child Care Growth and Development Common Childhood Illnesses Safety and the Environment
Nutrition:	Breast Feeding Infants and Toddlers Pregnancy and Lactation
Social Services:	Community Resources Family Violence

It was expected that at the end of training, the LHAs would: (1) demonstrate an "every mother knowledge" of general maternal-child health issues and community resources, (2) display an affirming, non-judgemental attitude in their role as helper, (3) be able to share information effectively with their peers, and (4) be able to follow a problem-solving methodology.

Bilingual trainers were recruited from among health center staff, other health care professionals in the area, and graduate students at the University of North Carolina. Use of many different trainers provided the trainees with exposure to a variety of skills and expertise and helped encourage interest in the program among professionals in the area. Graduate students also collaborated on data collection and analysis.

---

1 Breast Self-Exam, Papanicolaou Test, Sexually Transmitted Diseases, Acquired-Immune Difficiency Syndrome

In 1988 and 1989 a total of 78 women were recruited by the LHA program; 50 of these women participated in less than four sessions. The 20 who completed the training program in 1989 were joined by 20 LHAs trained in previous years to total 40 LHAs serving the intervention sites in the summer of 1989.

A profile was completed on a subsample of LHAs to develop an understanding of the demographics of this group. Ages of the women ranged from 15 to 52 years with the majority between 20 and 30. Five of the women had no children and three were grandmothers. Length of stay in the United States ranged from less than one year to over ten years. Almost all were farmworkers. In addition to demographic data, women were asked about past helping behaviors. Half stated they had helped at least one or two people in the last week. Most of that help occurred in the women's homes. The vast majority of those contacts were with family and friends.

During the first project, minimum wage was offered for the hours women attended the training sessions in an attempt to acknowledge that time and participation were important. Subsequently, this incentive was not offered for several reasons: 1) it did not seem to affect attrition, 2) it would be seen as creating an extension of clinic staff and, therefore, activities would stop if payment were discontinued, and 3) a financial commitment might be difficult to replicate by other centers. Other efforts to acknowledge participation were also made. In 1985, a certificate of recognition was presented to each LHA. In subsequent years, gifts of books and other materials related to the program were given. An "Ask Me" button, used to facilitate identification during the evaluation phase was perceived by the women as a reward (Figure 4).

There is much philosophical debate about the use of certificates or rewards in programs such as this. Project staff made the decision to award educational materials, rather than diplomas, caps, or pins, in keeping with the non-traditional focus of the program. That LHAs, themselves, seemed to understand the concept was illustrated by this participant:

> "Being a lay health advisor means knowing about the things that go on inside, around and about you and your loved ones. It taught me things I didn't know and things I

thought I knew but learned I could know more about. For me knowing that I finished the class is an achievement in itself. I need no other rewards or diploma, but enjoy the knowledge gained about myself."

(From "Real Talk" the newsletter of the Migrant Dropout Reconnection Program, Geneseo, New York, 1987.)

Figure 4. Identification Buttons Used By Lay Health Advisors

C. Data Collection

Two methods were used in the collection of data regarding the target population. A population approach, rather than an individual case method, was used in gathering data about increase in knowledge of health practices. A questionnaire on health knowledge (Knowledge Test) was administered to women at the intervention and control sites who were attending prenatal clinic or bringing their infant to well child clinic. A questionnaire concerning the extent and content of interaction with LHAs (Exposure Questionnaire) was also administered to this population at the intervention sites. A population approach was selected to collect this data because of the mobility of the migrant farmworkers.

A case method was used in relation to the health status of women who received prenatal care and children under one year of age who received sick and well child care by obtaining data from medical records and other sources at both control and intervention sites. Information on the health practices of the pregnant women and mothers in regard to their children was also secured from these records.

Data concerning the LHAs' knowledge of health practices and their activities with the target population were obtained through the administration of questionnaires (Knowledge Test and Helping Contacts Questionnaire).

1. Sample Size

a. Knowledge of Health Practices and Interaction with LHAs

Pretests and posttests of the Knowledge Test were administered to 224 Hispanic women receiving prenatal care and/or taking their child for well child care at the intervention and control sites between June 1 and October 1, 1989. The Exposure Questionnaire was implemented from April through October 1989 with 326 Hispanic women from this population at the intervention sites. Approximately 73% of the sample of women who completed the Exposure Questionnaire were pregnant women or mothers of children also enrolled in the case study sample. Pre and

posttests of the Knowledge Test and the Helping Contacts Questionnaire were completed by the 20 LHAs trained in 1989.

b. Health Practices and Health Status

Data were collected on health practices and health status of prenatal patients and two groups of children in the first year of life. They were of all ethnic groups and attended intervention and control sites. One group of children were the newborns of the prenatal patients enrolled in the project. We refer to them as "newborns" throughout the study. The other group was composed of infants who were enrolled from birth through 12 months of age but whose mother did not receive prenatal care while enrolled as a project participant. We refer to this group as "infants."

There were 613 pregnant women enrolled in the project between October 1, 1987 and December 31, 1989. Twenty-four of these women had repeat pregnancies and represent less than 4% of the total prenatal population. They were not excluded from the study because it was believed they would not affect the independence of the two samples. The newborn sample included 202 children born to these women and on whom data were available. Only single births were included. The infant sample was composed of 186 infants who were enrolled from birth through 12 months of age and who received pediatric services between 10/1/87 and 12/31/88.

Results of the project are presented only in relation to the Hispanic population because they represented the largest proportion of the study population and Hispanic women of the childbearing age were the focus of the intervention (Table 1). There were 519 Hispanic pregnant women, 23 of whom had repeat pregnancies. There were 185 Hispanic newborns on whom data were available and 160 Hispanic infants were enrolled in the project (Table 2). Data for newborns and infants were combined where indicated.

2. Enrollment in the Case Sample

The five target health care agencies enrolled pregnant migrant women and infants from birth through 12 months of age in the project through informed consent. Women were told that the project intended to improve their health status and that of their child through a peer counselor health education program. All pregnant migrant women who sought prenatal care at the agencies were eligible for participation in the project as were all migrant infants, birth through 12 months of age, who received child health services.

Enrollment of pregnant women for the project's first year began October 1, 1987 and ended December 31, 1988. This cohort served as baseline. Enrollment of a second cohort of pregnant women began January 1, 1989 and ended December 31, 1989. This group would have had the opportunity to interact with the lay health advisors and served to measure the effectiveness of the program. The newborns of both cohorts of women were enrolled if they returned to the health centers. They were followed up to their first birthday with data collection ending July 30, 1990.

Infants up to 12 months of age, whose mother did not receive care through the project, were enrolled between October 1, 1987 and December 31, 1988. The project intended to measure their health status up to 18 months of age. It was decided that infants would be enrolled only during 1988 in order to follow health care through 1989. A second infant cohort was not included because data analysis was scheduled for 1990.

3. Tracking System

Project staff held two meetings each year, at the beginning and the end of migrant season, with agency directors and clinic staff to discuss project objectives, on-going activities, and progress toward achieving project goals. Guidance was provided by project staff on how to improve tracking (obtaining the necessary information from the client) and follow-up (insuring necessary services were provided) of migrant women and infants. Written reports with preliminary findings were provided to the agencies at the end of the first and second years.

In order to track health care, pregnant women and mothers of infants were provided with a plastic "MCH record pouch" containing a copy of their medical record and several self-addressed stamped postcards. The pouch was given to migrant families on their first visit because many remain in the area a very short time before moving to another state. The postcards were returned by agencies providing follow-up care after the families left North Carolina. To facilitate the tracking of pregnancy outcomes, a permanent address and anticipated location of delivery were documented in their medical record. These locations were matched with migrant health centers through use of the National Migrant Resource Program's Referral Directory. The project's data manager sent a copy of the project consent form and a letter requesting antenatal and delivery records from identified hospitals and health centers.

In the beginning of the project's second year (1989), the project coordinator arranged a meeting with staff from the Division of Maternal and Child Health, Florida Department of Health and Rehabilitative Services. The meeting was held in Tampa, Florida and included nursing supervisors from county health departments identified by project participants. The purpose of the project was explained, including a detailed discussion of the tracking system. The National Migrant Referral Directory includes a comprehensive listing of migrant health centers, but not county health departments. County health departments in Florida provide services to large numbers of migrant farmworkers. Therefore, directories of county health departments in North Carolina and Florida were exchanged, which included names of nursing contacts, to facilitate tracking of health data.

4. Instruments

A multifaceted approach was used to evaluate the effectiveness of the lay health advisor program. Data collection tools were designed to measure the effects of the intervention on knowledge and levels of social support which, in turn, would impact change in health practices and health status.

Program intervention data were collected from direct interviews with LHAs and the target population at the five agencies. A Knowledge Test regarding maternal and child health practices was administered as a pretest and posttest to LHAs and the target population at intervention and comparison sites. The Knowledge Test consisted of 19 items. Seven were true/false, and the remaining 12 were open ended. Interviews were conducted in the waiting room of the health centers when the women had appointments either for prenatal care or well child care. Interviews were conducted by a bilingual Hispanic woman who had been trained by project staff in interviewing techniques. The interviews took approximately 15 minutes to complete. Interviewing was often interrupted so that the women could be seen in a timely manner by clinic staff. Very few interviews, therefore, were actually completed within 15 minutes. Although frequent interruptions were a problem, it was important to respect clinic operations.

The Helping Contacts Questionnaire obtained information regarding provision of social support as reported by LHAs following the training program. This questionnaire was conducted in the LHA's home at two weeks and six weeks following the training program. There were 11 items which were designed to follow the format and content of the Exposure Questionnaire administered to the target population. LHA's were asked to describe the number and type of helping contacts made in the two and six week intervals after training. Data were also gathered on the relationship the "helpee" had to the LHA (i.e. family, friend, neighbor, etc.), where the help occurred, and a description of that help. LHAs were also asked to rate their own effectiveness in helping someone else.

An Exposure Questionnaire measured the reception of social support as reported by the target population, and was administered to a subsample of the target population at the intervention sites. It consisted of 18 items that measured numbers of LHAs identified by women in the target population. Women were then asked to talk directly about the LHAs who had "helped" them over the course of the summer. Type of help was described as well as where the "helping contact"

occurred, the appropriateness of that help to the goals of the program, satisfaction of women helped, and types of social support provided. Two of the 18 items (those that asked about appropriateness and satisfaction) were open-ended. The questionnaire took about 15 minutes to administer, although the same limitations and procedures for conducting the interview existed for the Exposure Questionnaire as described above for the Knowledge Test.

Process data, such as, trimester initiated prenatal care, number of prenatal visits, postpartum visits, well child visits, and immunization status, as well as outcome data were collected from medical records of health centers and hospitals providing care. The project data manager made site visits to each health care agency at regular intervals in order to transcribe key health indicators on data collection forms. Data on prenatal patients and their newborns were collected between October 1, 1987 and July 30, 1990. Data on infants were collected until they were one year of age.

D. Method of Analysis

1. Data Related to Health Practices and Health Status

a. *Prenatal Population*

Women at the control and intervention sites were compared for differences in four types of measures within each year using Fisher's Exact test or Pearson's Chi-square Approximation except where Student's t-test was used to compare means for age, gravidity, parity, number of prior fetal loss, and number of living children. A Bonferroni correction was used within each of the four types of measurement to adjust for multiple comparisons (6 demographic, 6 obstetrical history, 7 health status and 12 pregnancy outcome variables).

For the control and intervention sites, women in the 1988 cohort were compared to those in the 1989 cohort for differences in hematocrit or hemoglobin levels, trimester of initial care, adequate number (nine) of prenatal care visits, low birthweight, postpartum visit, postpartum Papanicolaou test, contraceptive use, oral contraceptive use, and the carrying of records. Logistic

regression was used (except for trimester of initial care, where a proportional odds model was used) with a Rao score statistic to assess the significance of the site by year interaction, since it was hypothesized that the women at the intervention site on the 1989 cohort would differ from the other women, i.e., difference between sites at different cohorts. Modelling adjusted for educational level, marital status, age, and occupational status as possible confounders.

to assess the generalizability of the findings, a Mantel-Haenzel test was used to compare Hispanics and non-Hispanics in the 1988 and 1989 cohorts with regard to adequate number (nine) of prenatal visits, trimester initiated care, and postpartum visits, adjusting for site.

b. *Newborn and Infant Population*

The term "project status" used in this section refers to the classification of children described earlier as newborn or infant vis-a- vis a mother's participation on the project as a prenatal patient. Children at the control and intervention sites were compared for differences in two types of measures (2 demographic and 8 health status variables) within each year using a Mantel-Haenszel test (or tis extension) to adjust for project status. Number of well child and sick child visits was trichotomized (0, 1, 2+) for analysis. For illnesses and injuries, number of well child visits, number of sick child visits, and immunization status measures, comparisons were made across age bands for the children (age bands: 0-1, 1-2, 3-4, 5-6, 7-9, 10-12 months) using a Mantel-Haenszel test extension. These age bands were selected because they represented the recommended standard for well child visits (American Academy of Pediatrics, 1985). For the number of well child and sick child visits, children who had their first visit in an age band other than the first one were counted as having zero visits in the age bands before the one in which they had their first visit. In this way, each child had assessment for each age band prior to their last visit. A Bonferroni correction was used within each of the two types of measures to adjust for multiple comparisons.

In the 1988 cohort, children were compared for differences between their project status and several health status measures (immunization status, illnesses/injuries, and numbers of well child and sick child visits) using a Mantel-Haenszel test (or its extension) and adjusting for site and age bands.

For the control and intervention sites, children in the 1988 cohort were compared to those in the 1989 cohort for differences in hematocrit or hemoglobin levels, illnesses/injuries, number of well child visits, number of sick child visits, immunization status, and the carrying of records. As with the women receiving prenatal care, logistic regression was used (except for number of visits, where a proportional odds model was used) with a Rao score statistic to assess the significance of the site by year interaction. Modelling adjusted for project status, gender, and age band as possible confounders.

To assess the generalizability of the findings, a Mantel-Haenzel test (or its extension) was performed to compare Hispanics and non-Hispanics in the 1988 and 1989 cohorts with regard to low birthweight and occurrences of illnesses and injuries, adjusting for site, age band, and project status, where applicable.

IV. RESULTS

Results are presented in relation only to the Hispanic population because they represented the largest proportion of the study sample and they were the focus of the intervention. The prenatal patients, who were the mothers of the newborns receiving pediatric services, and the mothers of infants less than one year of age who did not receive prenatal care at these sites, were the population which would interact with lay health advisors. Data regarding the demographic characteristics of the prenatal population and newborn and infants are presented first. This is followed by results of the training of lay health advisors and implementation of the intervention. Subsequently findings in regard to changes in the health practices and health status of the target population are reported.

A. Demographic Data

1. Prenatal Population

There were 252 Hispanic women in the 1988 cohort. Sixty-five received prenatal care at the control sites and 187 at the intervention sites. The 1989 cohort included 290 Hispanic women. Seventy-nine attended the control sites and 211 at the intervention sites. Twenty-two women in the 1988 cohort had another pregnancy in 1989. One woman in the 1989 cohort had two pregnancies that same year.

The control and intervention sites in 1988 and 1989 were similar in regard to the sociodemographic characteristics of age, marital status, and level of education. Two variables which differed significantly after adjusting for multiple comparisons were occupational status and the number of social problems. In the 1988 cohort a higher percentage of women at the control sites were unemployed when they registered for care (50%) in comparison to those at intervention sites (27%) (Fishers' 2-sided Exact test, $p<.0001$; Table 3). This is believed to be due to seasonal variation in agricultural employment.

In both 1988 and 1989 a statistically significant higher percentage of women at the control sites reported more than one social problem than did women at the intervention sites (Fishers' 2-sided Exact test, 1988 cohort, p=.0011; 1989 cohort, p=.0082; Table 4). Unplanned pregnancy and lack of financial resources were the two most frequently mentioned problems. Insufficient education was third in frequency for the 1988 cohort and lack of transportation was third for the 1989 cohort.

Due to the similarities within each cohort, findings will be presented only in relation to the comparison between the 1988 cohort, which represents the baseline year, and the 1989 cohort which represents the experimental year.

There were no statistically significant differences between the 1988 and 1989 cohorts in regard to the demographic characteristics of the women attending the control and intervention sites. In both years, the mean age of the women was 22.9 with nearly two-thirds of the women being in the 20-29 year age group (Table 5). Approximately 50% had a sixth grade education or less (Table 6). Nearly three-fourths of them were married (Table 7). Roughly 50% of them were employed at the time they registered for care (Table 3).

2. Newborn and Infant Population

The 1988 cohort was composed of 223 Hispanic newborn and infants (Table 8). There were 63 newborns of mothers who had received prenatal care at the study sites and 160 infants from birth to one year of age whose mother had delivered before coming to North Carolina. The 1989 cohort was composed only of 122 newborns of mothers who had received prenatal care at the study sites (Table 8). The fact that the 1988 cohort includes infants accounted for the difference between the cohorts in regard to age at first visit for care in the study health centers. Fifty-five percent of the 1988 cohort made their first visit in the first two months of life, whereas 85% of the 1989 cohort did so. Within the 1988 cohort there were significant age differences between infants

and newborns (Mantel-Haenszel test, p<.001). Only 39% of the infants were two months or less of age when they were first seen in the clinic whereas 95% of the newborns were.

B. Program Intervention

1. Change in Knowledge of Lay Health Advisors

The Knowledge Test was administered to 20 LHA's both before and after the training sessions conducted in 1989. The LHAs answered an average of 60% of the pretest questions correctly. There was a statistically significant improvement in knowledge following the training program. At two weeks following the program they answered 84% correctly and at six weeks 80%. Both posttests appeared to have the same mean.

2. Change in Knowledge of Target Population

In the summer of 1989, a pretest of the Knowledge Test was given to 76 women at the intervention sites and 39 at the control sites prior to the initiation of the training sessions for the LHAs. A posttest was given to 68 women at the intervention sites and 41 at the control sites after the training was completed and there had been opportunity for the target population to interact with the LHAs. The overall scores of the pretest and posttests in the target population were fairly high (>60%). There was no statistically significant change between pretest and posttest scores at either the control or intervention sites, but, since only a small number of women took both tests, this reflected changes in the performance of population groups rather than changes in individual patients. Both pretest and posttest scores were consistently lower on items about family violence, cancer screening, and pesticide safety. In contrast they were consistently higher on items about initiation of prenatal care and child discipline.

3. Provision of Social Support as Reported by Lay Health Advisors

Interviews with the 20 lay health advisors trained in 1989 indicated 16 of them made an average of 3.25 helping contacts during a two-week period. The topics most frequently reported were well child care, family planning, prenatal care, and cancer screening. Although the women

in the target population and the LHAs reported an average of three helping contacts, the frequency in relation to topic discussed differed, with the exception of well child care. The Profile of the LHAs described in Chapter Two reported that most helping contacts occurred at home among family and friends. Help with the health of their children, issues involving family problems, and referrals were most often cited. In reviewing the data from the three questionnaires (Exposure, Helping Contacts and LHA Profile) there was consistency in types of help, location of that help, and the network relationships of the people involved.

4. Reception of Social Support as Reported By Target Population

In addition to measuring change in knowledge, project staff were also interested in evaluating the interactions between LHAs and women in the target population to determine the extent of sharing of new knowledge. Therefore, a two-pronged approach directed at the target population and LHAs was developed.

A total of 484 interviews were administered between April and October 1989 to 326 individual Hispanic migrant farmworker women. Women were interviewed once a month and could be interviewed more than once depending upon frequency of visits to the clinic. This was done in order to evaluate change in level of interaction over time. The interviews took place on the day of prenatal or a well child appointment at the intervention sites. The women were shown photographs of each lay health advisor to facilitate identification and were asked if they had seen anyone wearing an "Ask Me" button.

Of the 326 women, 133 (41%) did not recognize any LHA. One hundred and fifty-one (46%) recognized at least one LHA, and 42 (13%) reported that they recognized and were helped by a LHA. An average of 3.1 helping contacts were reported by the 42 women. These helping contacts most frequently occurred in the home or at the health center. Those helped describe the LHA most often as a family member or friend. Frequency of exposure to lay health advisors,

reported by women in the target population, and problems addressed by LHAs are presented in Figure 5.

Figure 5. Problems addressed by Lay Health Advisors[+] Over a 6 Month Reporting Period

Topics	Frequency
Well child care	40
Nutrition/WIC	40
Childhood illnesses	38
Family planning	37
Breastfeeding	33
Immunizations	32
Prenatal care	32
Accident prevention	28
Postpartum care	28
Head Start/school	24
Adult illnesses	21
Domestic problems	21
Pesticides	16
Cancer screening	12
Dental care	9
STDs	8

[+]n=42 women from the target population reporting

Women in the target population were asked to describe the type of social support they received from the LHAs (Figure 6).

Figure 6. Type of Social Support Provided by Lay Health Advisors as Reported by the Target Population

	Number of Reports	% Total Population
Assistance	49	12.1
Information	18	4.5
Sympathy/Concern	49	12.1
Self Help	35	8.6

n= 42 women from the target population reporting; support may have been provided to an individual in relation to more than one contact.

C. Process Objectives/Health Practices

1. Prenatal Population

One hypothesis of the project was, that as a result of the social support received from LHAs, women who enrolled for prenatal care at the intervention sites would be more likely than those at the control sites to receive adequate prenatal and postpartum care, carry their medical records, receive an annual Papanicolaou test, and choose a family planning method.

Kessner's index of adequate prenatal care (Kessner, 1973) includes initiation of care in the first trimester of pregnancy and at least nine prenatal visits. The proportion of all the women in the cohort who initiated care in the first trimester was nearly similar in both the 1988 and 1989 cohorts -- 41% and 44% respectively (Table 9). However, there was an observed, but not statistically significant, difference in behavior between women at the control and intervention sites. The proportion of women at the control sites first seeking care in the first trimester remained essentially the same in 1988 and 1989 (43% and 42%, respectively) whereas the proportion of women at the intervention sites initiating care this early in pregnancy increased 5%

(40% and 45% respectively). Fewer women at the intervention sites began care in the second trimester (a decrease from 40% to 35%) and the proportion seeking care in the third trimester remained the same (20%). The proportion of women at the control sites seeking care in the third trimester increased, however, from 12% in 1988 to 21% in 1989.

Data were available on the outcome of pregnancy of 191 patients in the 1988 cohort and 232 in the 1989 cohort (Table 10). In the 1988 cohort, 185 women had a livebirth and in the 1989 cohort, 215 women had this outcome (Table 10). The cohorts were almost similar in the percentage of women who made the recommended nine or more visit for prenatal care--47% in 1988 and 44% in 1989 (Table 11). There was little difference between control and intervention sites within the cohorts and no improvement in the health practice of number of prenatal visits on the part of women attending the intervention sites. Forty-six percent of the women receiving prenatal care at the intervention sites in 1988 made nine or more visits as compared to 43% of the women attending these sites in 1989. The number of visits included those made in other states as well as North Carolina.

Data were collected on women for whom outcome data were available regarding whether or not they made a postpartum visit. In the 1988 cohort, data were available on 192 women. (One woman's pregnancy outcome was not reported but postpartum visit information was.) Sixty percent made a postpartum visit. Records for 1% stated the patient did not return and for 39% there was no report regarding whether a postpartum visit was made or not (Table 12). Data were available on 232 women in the 1989 cohort. Seventy-one percent made a postpartum visit. Records for less than 1% stated that the patient did not return and for 28% there was no report regarding whether or not the patient returned. In both cohorts, the proportion of women attending the intervention sites who made a postpartum visit was slightly higher than the proportion of women at the control sites but it was not statistically significant.

Papanicolaou (PAP) tests are routinely completed in a woman's first trimester. However, migrant women may receive one at any time, depending on time of entry of care. For the purposes of this study, a PAP test within four months of delivery or at the time of the postpartum visit was considered adequate care. Of the women with known pregnancy outcomes, 80% in the 1988 cohort and 69% of the 1989 cohort had a PAP test within this time interval (Table 13).

Data were available on 110 women in the 1988 cohort and 164 of the women in the 1989 cohort in relation to their decision at the time of their postpartum visit regarding contraceptive use (Table 14). Over 90% of these women in both cohorts decided to use contraceptives. Of those who decided to use contraceptives, 76% of the 1988 cohort and 80% of the 1989 cohort selected the oral method (Table 15). Differences in oral method use between intervention and control sites were not statistically significant when they were compared within each cohort nor when data were analyzed for change between the 1988 and 1989 cohort.

The proportion of prenatal patients at the intervention sites in the 1988 cohort who carried their record pouch to clinic (50%) was significantly higher than the proportion of women at the control sites who did so (35%) (Fisher's 2-sided Exact test, p=.0437; Table 16). In the 1989 cohort, however, there was a decline at both types of sites in the proportion of women who carried the pouch to clinic. Although the proportion at the intervention sites who did so (33%) remained higher than at the control (29%), the difference was not significant. This item was subject to underreporting because it was dependent upon staff asking patients about the record and was not part of the usual medical history.

2. Newborn and Infant Population

An objective of the project was to increase the proportion of children who received well child care at the intervals recommended by the American Academy of Pediatrics (three visits by six months of age and six visits by 12 months of age). As differentiated from prenatal patients, data were available only on clinic visits made in North Carolina. Data were analyzed according

to the number of well child and well-sick child visits.[2] The proportion of children making the recommended number of visits by six months of age was low. Ten percent of the 1988 infants, 18% of the 1988 newborns, and 15% of the 1989 newborns had made three well and/or well-sick child visits by the time they were six months old (Table 17). Differences between control and intervention sites across age bands and project status were not statistically significant.

Attainment of the recommended visits by the age of 12 months was even less satisfactory. Because so few children received the recommended six visits, data regarding the proportion making five visits are also reported. In the 1988 cohort, 2% of the infants at the intervention sites made five visits but none of the infants at the control sites made this number of visits. None of the infants at either the intervention or control sites made six visits. Among the 1988 newborns, 7% at the intervention sites made five visits but none of the newborns at the control sites made this number. Seven percent of the newborns at the intervention sites made six visits by the age of one year, but none of the newborns at the control sites did so. Of the 1989 newborns, 7% at the intervention sites made five visits but none at the control sites made this number. Two percent of the newborns at the intervention sites and 4% at the control sites made six visits by 12 months of age.

Another objective of the project was to increase the percentage of mothers who brought their child's health records (in this instance, the Maternal and Child Health pouch) in order to enhance the continuity of care. As with the prenatal patients, there was a decline in the proportion of mothers of infants and newborns who carried the records (Table 19). In 1988, 29% of those in the intervention sites carried records while 12% of those in the control sites carried them. This difference was significant after adjusting for multiple comparisons of seven health status

---

2 A well-sick visit refers to when a child was scheduled for a well child visit but was found to have a mild illness (e.g. otitis media or cold). If the child were too sick, the well-child components of the visit (i.e. developmental screen and immunizations) would be postponed and it would be counted as a sick child visit.

measures (Fisher's 2-sided Exact test, p=.003). In 1989, 8% of the women at intervention and 4% at the control sites carried their children's records.

D. Outcome Objectives/Health Status

One of the hypotheses of the project was, that as a result of interaction with the lay health advisors, there would be improvement in the health status of the prenatal patients, newborns, and infants at the intervention sites. The findings regarding assessment of their health status are presented in the following section.

1. Prenatal Patients

Obstetrical history. The two cohorts were similar in regard to obstetrical history. They had a mean gravidity of 2.8 (Table 20). Between 14% and 18% had a history of previous fetal loss (Table 21). The mean parity was 1.6 for the 1988 cohort and 1.5 for 1989 (Table 20). The percentage of women who had previously given birth to infants with low birthweight was less than 7% in both cohorts (Table 22). Two to 6% percent had a history of neonatal and postneonatal deaths (Table 23). The mean number of living children was the same as the mean of parity for each cohort.

Health status during current pregnancy. Women had either hematocrit or hemoglobin measured. There was an observed increase between the 1988 cohort and the 1989 cohort in the proportion of women at the intervention sites who had normal hematocrit or hemoglobin levels (Table 24). (Normal hematocrit is defined as >34% and normal hemoglobin as >11%.) Fifty-eight percent of the women at the intervention sites in 1988 had a normal hematocrit or hemoglobin level on the first visit, and 70% of the women seen at these same sites in 1989 had a normal hematocrit or hemoglobin level. The proportion of women at the control sites who had normal hematocrit or hemoglobin values remained constant in 1988 and 1989 at 77%. In the 1988 cohort, the control group had fewer low hematocrit or hemoglobin measures than the intervention group (Fisher's 2-sided Exact test, P=.0105), but this difference was judged not

statistically significant when adjusted for multiple comparisons of seven health status measures (Bonferroni Correction). In the 1989 cohort, the intervention group had fewer low hematocrit or hemoglobin measures than the 1988 intervention group cohort and approached proportions similar to the 1988 and 1989 control cohorts. This change in the intervention group was not large enough to achieve statistical significance using logistic regression analysis and adjusting for previously mentioned possible confounders. Therefore, this change cannot be attributed to the intervention.

Approximately 30% of the women in both cohorts had illnesses related to pregnancy (Table 25). These included hypertension, pre-eclampsia, pregnancy induced hypertension, diabetes, gestational diabetes, urinary tract infection, sexually transmitted diseases, and tuberculosis. Data on prevalence of tuberculosis in the 1988 cohort was based on a positive PPD (Purified Protein Derivative) test and in the 1989 cohort on confirmed diagnosis recorded in the medical record. The two most frequently experienced illnesses were sexually transmitted diseases and urinary tract infections.

Reduction in low birthweight. One hypothesis of the study was that, as a result of receiving the guidance from the lay health advisors, women at the intervention sites would come earlier and more continuously for prenatal care and would deliver fewer low birthweight infants than women who enrolled for prenatal care at the control sites.

Data were obtained on the outcome of pregnancy for 191 (76%) of the 252 women in the 1988 cohort and 232 (80%) of the 290 women in the 1989 cohort by July 30, 1990 when data collection ended. Ninety-seven percent of the known outcomes of pregnancies in the 1988 cohort were livebirths as were 93% of the outcomes in the 1989 cohort (Table 10).

Four percent (n=8) of the newborns and infants, on whom data regarding birthweight were available, in the 1988 cohort and 3% (n=8) of the 1989 cohort were low birthweight (Table 26). The percentage of low birthweight newborns and infants at the control sites decreased from 2% in

1988 to zero in 1989. The percentage at the intervention sites decreased from 7% to 5%. Neither this 2% change between 1988 and 1989 nor the 5% difference between control and intervention were significant. However, the fact that there was a reduction in the percentages is important for the health centers involved in the study to note and to continue to monitor pregnancy outcomes to see if the decline continues.

2. Newborn and Infant Population

Immunization levels. Data regarding adequacy of immunization were analyzed separately for newborns and infants according to age bands (Table 27). The 0-1 month age band was not included since immunizations are not administered to that age group. The measure was based on whether or not the child had received the immunizations recommended by the North Carolina Division of Maternal and Child Health according to the child's age at the last clinic visit during the period of the study (NC Division of Health Services, 1986). There was a statistically significant difference between newborns whose mothers received prenatal care at the study centers and the infants whose mothers did not (project status). In 1988 a higher proportion of newborns were adequately immunized than were infants across age bands and sites (Mantel-Haenszel test, $p<.001$). Differences between control and intervention sites in regard to immunization status were not significant.

Illnesses/injuries. An objective of the project was to reduce the proportion of children having serious illnesses or injuries in the first year of life through intervention by lay health advisors. There was an observed difference of a higher proportion of newborns having a reported serious illness or injury than the infants across the age bands (Table 28). The proportion of the 1988 newborns who had a serious illness or injury appeared to be slightly higher than that of the 1989 newborns. The difference between control and intervention sites in regard to incidence of serious illness or injury was not statistically significant. The four most frequently occurring illnesses to newborns and infants in both cohorts were (in order of frequency) respiratory

problems, ear infection, gastro-intestinal problems, and skin problems. In the 1988 cohort the next three most frequent were conjunctivitis, viral syndrome, and yeast infection, while in the 1989 cohort they were yeast infection, conjunctivitis and hyperbilirubinemia. All other illnesses occurred two or less times. Only two children in each cohort suffered injuries. One child in the 1988 cohort had a scalp contusion and another a puncture wound (site unspecified). In the 1989 cohort a child had a cerebral contusion and another experienced second degree burns.

Frequency of visits. There was a significant difference in regard to the proportion of children making sick visits (Table 29). A statistically significant higher proportion of newborns and infants at the control sites made sick visits than did those at the intervention sites in both cohorts across age bands and project status (Mantel-Haenszel tests -- 1988: $p=.004$; 1989: $p<.001$). This was especially true in the younger age bands (0-1 and 1-2 months). Also, there was an observed difference of a higher proportion of newborns in both cohorts in these younger age bands having made more well child visits than infants (Table 30).

Hematocrit or Hemoglobin Levels. There was a statistically significant difference between the combined sample of 1988 newborns and infants seen at the intervention sites and the newborns seen at the same sites in 1989 in regard to hematocrit or hemoglobin levels (Table 31). The first hematocrit or hemoglobin measurements were taken on these children six months of age or older. The proportion of children with normal levels increased from 33% to 53% at the intervention sites. This difference was detected using logistic regression adjusting for previously stated possible confounders with Rao score statistic $p=.0093$). While the proportion with normal levels at the control sites decreased, the number of children involved was small.

E. Discussion

Based on years of experience with funding demonstration research grants to find prevention and control interventions that "work" with populations at risk, the National Institutes of Health (NIH) observed that effective intervention development goes through a sequence of stages

(Greenwald and Cullen, 1985). Using the NIH criteria, the Migrant Lay Health Advisor Model is an example of a Level 1 intervention, i. e. an initial efficacy trial to examine feasibility, acceptability, and penetration with a specific population. It is not until Level 3 that interventions are ready to go through an effectiveness trial to examine impact. A Level 5 intervention is evaluated for wide scale transferability and diffusion. Moving through these five stages, an intervention is progressively revised and re-examined before being widely disseminated as one that "works."

The results from our project lead us to conclude that the Migrant Lay Health Advisor intervention is feasible for a primary care center to conduct. The logistical constraints of the project served as barriers to evaluation activities more so than to implementation activities. The mobility of the migrant farmworker population makes it imperative to have an efficient tracking system if outcome data are to be obtained. Recruitment and retention of farmworker women as LHAs, absence of monetary payment, availability of Spanish literacy training materials and methods, as well as transportation and scheduling of training were not found to be impediments that a primary care center staff could not overcome.

Our findings also indicate that the intervention approach and activities are acceptable to Hispanic migrant farmworker women. The Lay Health Advisor model's assumption appears to be valid, i.e., that for this population, social networks exist and connect women to one another through supportive relationships. LHAs are known by a sizable number of pregnant women and new mothers through a range of kin and non-kin relations. They also come in contact with one another in a variety of private and public settings through the normal course of daily activities. By increasing the maternal and child health knowledge and skills of certain members of these social networks (i.e., LHAs), definite trends were observed to improve the population's use of preventive maternal and child health services, e.g., earlier initiation of prenatal care and obtaining more well child visits for newborns. These changes in health practices along with the significant

increase in knowledge among LHAs can be interpreted to mean that health information is being transferred from woman-to-woman. The observed non-significant knowledge change in the population may be more reflective of a methodological problem with measurement than a faulty intervention approach.

With regard to the intervention's capacity to penetrate an historically hard-to-reach population, we can draw two conclusions from the evaluation findings. One is that recruiting and training members of existing social networks is a viable entry point for reaching women with maternal and child health information and assistance beyond the walls of a clinic. The penetration is through naturally occurring social support relationships. Secondly, LHAs can be effective links to health and human service agencies by establishing an on-going relationship with specific staff members through recruitment and training activities. The penetration is through creating new ties, hence, expanding the reach and helping capacity of the LHAs' social networks. The combined result from these two effects is that LHAs function as educator-organizers, not as outreach workers to persuade women to use services.

More work and evaluation are needed to move the Lay Health Advisor intervention to the next level. Our project has completed the work necessary to conclude that this intervention is feasible, acceptable, and able to penetrate the migrant farmworker population to improve maternal and child health practices.

Aspects of the structure of the project restricted its ability to document the long-term effect of the LHA intervention. The three-year funding period limited the design to a one-year interval between baseline data and assessment of the intervention. This is too short an interval to obtain meaningful data on change in a population's health status. The populations of pregnant migrant farmworker women and mothers of infants were used as the unit of analysis rather than the individual case, in regard to knowledge of practice and exposure to LHAs, because it was thought the mobility of the subjects would present difficulties in tracking individuals. As a result,

the project attempted to measure the effect of penetration of 42 lay health advisors on the target population of 519 Hispanic prenatal patients and 160 Hispanic mothers of infants who delivered outside of North Carolina. It is recommended that future studies attempt the assessment of change achieved by individuals who have interacted with the LHAs, even though it would be time consuming to identify specific women in the LHAs' social networks and to obtain the required follow-up data from their travels.

Despite these limitations, improvements in the health practices and health status of these women and their children were noted. There was an observed trend of an increasing number of women at the intervention sites entering prenatal care in the first trimester and returning for postpartum care. There was also observed improvement in the hematocrit or hemoglobin levels of women attending the intervention sites.

This Hispanic population had a low percentage of low birthweight newborns and infants (4% in 1988 and 3% in 1989 for both sites combined). This finding is similar to the Hispanic Health and Nutrition Examination Survey (HHANES) conducted 1982-84, which documented the percentage of low birthweight children for women of Mexican origin as 5.3 (Guendelman, 1990). The Survey found this percentage of low birthweight children was closer to that for white births than the percentage for black. The percentage of low birthweight Hispanic newborns and infants in our project was even less than the national percentage for white births. In 1988 the percentage of low birthweight children nationwide for all races was 6.9%, white 5.6%, and black 13.0% (telecommunication, the National Center for Health Statistics).

It was observed that a higher proportion of newborns in both cohorts made more well child visits than did infants of mothers who delivered elsewhere than North Carolina. A significantly higher proportion of newborns were adequately immunized across age bands and sites than were infants in the 1988 cohort. This indicates the possibility that continuity of health care of the newborn at the same site where the mother received prenatal care may be more likely to lead to

the mother seeking preventive care for her child. Approximately two-thirds of the infants and four-fifths of the newborns were adequately immunized for their age band yet only a small percentage of children made the recommended number of well child visits. This indicates that immunization levels are a better index of health practices than number and type of clinic visits. This probably is due to immunization status being documented and updated at each visit, including the recording of immunizations received elsewhere. In addition a significantly higher proportion of newborns in the 1989 cohort at the intervention sites had normal hematocrit or hemoglobin levels than did children in both the intervention and control sites in the 1988 cohort. This same group of newborns had a higher proportion with normal levels than did newborns at the control sites in 1989.

The subsamples of Hispanic prenatal patients and children were compared to the non-Hispanic patients enrolled in the larger study sample in order to determine the generalizability of the findings. Data regarding selected variables used as indices in evaluating the LHA program were analyzed. Non-Hispanics had a significantly greater proportion of low birthweight children (Mantel-Haenszel test, p=0.034). They also had a greater proportion of children with at least one illness/injury (Mantel-Haenszel test, p=.011). No statistically significant differences were found between the Hispanic prenatal population and the other ethnic groups in regard to number of prenatal visits, trimester initiated care, and postpartum visits.

Although the findings of this study are not generalizable to other ethnic groups in regard to all health status variables, findings indicate there are potential benefits from the LHA intervention and there is value in continuing to test the model. It is recommended that future projects focus on change in individuals' attitudes and knowledge levels in order to tap into the effectiveness of the relationship between the lay health advisors and the migrant farmworker women. Increased time should also be allowed between initiation of intervention and assessment in order for change to occur.

V. Publications and Dissemination of Results

A. Publications

The resource guide, "Migrant Lay Health Advisors: A Strategy for Health Promotion", and the video documentary by the same title produced during the previous project period (SPRANS 373415) were distributed to over 100 individuals and organizations. Volume II of the resource guide, which served as a preliminary final report, was distributed at the 1990 national migrant health meeting in Puerto Rico. Copies of educational materials developed for the lay health advisor program during SPRANS 373415 such as the children's growth charts and the prenatal weight gain chart also continue to be distributed.

B. Dissemination of Results

1. Consultation

Since 1987 project staff have provided consultation and technical assistance to numerous agencies within the state, and to both national and international agencies. At the local level, meetings have been held with staff of the Montgomery, Alamance, and Green county health departments and the hospitals in Johnston, Sampson, Nash and Wilson counties to advise on health promotion strategies for Hispanics.

Networking within the Migrant Health Program nationally strengthened the project's ability to collaborate with other migrant programs. Informal meetings to share strategies for implementing peer counselor programs were held at the 1989 and 1990 national migrant health meetings. A successful workshop on the LHA model was conducted at the 1990 meeting in San Juan, Puerto Rico with over 90 representatives of migrant health centers throughout the United States in attendance.

The project coordinator served on the Migrant Clinicians Network, which is sponsored by the National Migrant Resource Program, from 1988-1991. This board makes recommendations to

the Office of Migrant Health for health care programs and develops national guidelines for migrant health centers.

In 1987 the project coordinator travelled to Mexico on a World Health Organization fellowship to study *Promotora* programs in the 3 southern states from which many migrant families come. In addition, she was able to share ideas and strategies developed by the project for implementing peer counselor programs which may be adapted to programs in Mexico. In 1990 the training coordinator was invited by Partners of the Americas to travel to Cochabamba, Bolivia. Consultation and technical assistance was provided to representatives of the outreach/health education branch of the Bolivian State Health Department, the Federation of Mothers Clubs, and to volunteers providing health and social services to inmates of the women's jail on strategies for developing health education programs in maternal and child health. Materials gathered and developed by the LHA program were distributed to all agencies. The training coordinator was also a guest lecturer at the Catholic University of Bolivia School of Nursing.

2. Educational Activities

Project staff have been guest lecturers in the School of Nursing, and in the departments of Maternal and Child Health, Health Behavior and Health Education, and Public Health Nursing in the School of Public Health at the University of North Carolina at Chapel Hill. They served as preceptors for graduate students in these departments in the School of Public Health and for nursing students from the School of Nursing during their public health clinical training.

Project staff conducted presentations at local county, state, regional, and national meetings. These presentations have included an overview of the migrant and seasonal farmworker population in North Carolina, data on maternal and child health status, and cross-cultural strategies targeting health promotion and disease prevention. They have presented papers at annual meetings of the American Public Health Association (1988 and 1989), East Coast Migrant

Stream Forum (1988); The National Migrant Health Conference (1990) and the Annual Maternal and Child Health Regional Conference conducted by the Department of Maternal and Child Health (1989). Networking statewide and nationally in these ways should encourage the continued development of community-based health education programming as an important health promotion strategy.

VI. Future Plans

A. Continuation of Tracking and Data Collection

The project director has been invited to participate on the Migrant Health Task Force of the North Carolina Farmworker Council. The Task Force represents a collaborative effort between the Council and the North Carolina Primary Health Care Association to develop a strategic planning tool for preventive health services for migrant farmworkers and their dependents.

The project coordinator is collaborating with the National Migrant Resource Program and the National Perinatal Association in seeking funding to expand the tracking protocols along the entire East Coast Migrant Stream. She also participated in a workshop to revise data collection tools for the Comprehensive Perinatal Care Program funded by the Division of Special Populations and Program Development.

B. Continuation of Lay Health Advisor Program

In 1990, the project's final year, the training coordinator worked with the four study sites to develop viable strategies for continuing the LHA program at the local level. Eight graduate students from the School of Public Health were recruited to conduct follow-up sessions with LHAs in the TCCHC and Nash County catchment areas. A total of six sessions were held with 10 participants. The administrator of TCCHC has made a commitment to seek supplemental funding for continuation of the program.

As promised at the beginning of the project, consultation was also provided to Goshen Medical Center and Blue Ridge Health Center (the control sites) for initiating a LHA program. Goshen Medical Center appointed a bilingual physicians assistant as coordinator of the program. Six graduate students helped conduct the sessions. The training coordinator also met with staff of Blue Ridge Health Center and provided consultation on program implementation. A bilingual nurse was appointed as the LHA program coordinator in August 1990, and a pilot program was

conducted in the fall. The LHA Resource Guide and a packet of bilingual educational materials were distributed to all sites.

The training coordinator facilitated a series of meetings with professionals interested in peer counselor programs from the following agencies serving farmworkers in eastern North Carolina: Tri-County Community Health Center, Goshen Medical Center, Prospect Hill Community Health Center, Farmworkers Legal Services, East Coast Migrant Health Project, and the North Carolina Primary Health Care Association. The group met during the 1990 migrant season for sharing of information, materials and strategies. Collaboration within this network should insure that the LHA model continues.

Yearly meetings were held with the chiefs of the Division of Adult Health (Dr. Georgean Stoodt) and the Division of Maternal and Child Health (Dr. Ann Wolfe) of the Department of Environment, Health, and Natural Resources. Staff of the state's migrant health program, which is administered by the Division of Adult Health, were present. In the final year of the project, discussion focused on ways the LHA intervention could be continued statewide. The manager of the migrant health program suggested training the five or six outreach workers employed by his office each summer. A proposal has been submitted to Kate B. Reynolds Foundation by the Division of Maternal and Child Health to develop a peer counselor program state-wide modelled on the project's LHA program.

The Project's training coordinator continues to collaborate with the UNC School of Public Health on proposals regarding research and program interventions in migrant health. The proposal includes a "Safety Advisor" intervention modelled after the LHA program.

Through efforts of project staff, and other migrant health professionals in North Carolina, the state Council on the Status of Women is seeking funds to employ a full time bilingual counselor at Harbor, Inc., a center for battered women in Johnston County. A lay health advisor program is planned as part of that program.

C. Support and Resources Needed to Replicate

1. Recommendations Regarding The LHA Program

Program implementation and evaluation within the constraints of the migrant season are complex endeavors. Since workers and their families are in the area for a relatively short time, interventions and data collection must start quickly and be completed before workers leave. Staff on projects such as this must be bilingual, and have the professional expertise to develop program and research strategies appropriate to this setting. An example of a job description for a lay health advisor program coordinator is found in the Appendix. Staff of these programs should be on-site so that program planning is addressed to meet specific needs of the target population. They need the ability to build rapport quickly with the women. It is essential that health center administration encourage a climate in which staff can seek creative alternatives and work flexible schedules, such as, nights and weekends with travel to migrant camps.

One consideration in this particular type of program is that a number of key clinic personnel can not interact with LHAs because of language differences. LHAs, therefore, may have difficulty accessing resources because many agencies only provide for the English-speaking population. However, the project believes that health and social service agencies should recognize this gap in service provision and responsibly allocate resources to accommodate a growing Hispanic community.

Implementation of these programs are also affected by differences inherent between migrant health centers and local health departments, e.g., federal guidelines versus local governing board. The encouragement of programming that strengthens natural networks requires political expertise in "marketing" the idea to local government leaders who may not be familiar with or supportive of this strategy.

Migrant Head Start centers are encouraged to collaborate in this type of health promotion strategy since they serve the same population as the health centers and are mandated to provide parent education. Resources could be shared to support a mutual mission.

2. Recommendations Regarding Evaluation Methodology

Evaluation methods should be developed to accommodate a highly mobile population. Consultants should be flexible in choosing statistical methods appropriate to this unique type of research. Methodology should be based on individual measurements/assessments rather than population in order to obtain data on the interaction of the LHA with the individual migrant farmworker woman and on change in individuals over time. The model used in this project is based on effecting behavior change through the supporting value system of the target population. It is a slow process but it is believed to be more lasting than education by persons outside the consumer's social network or authoritative approaches. Evaluation design must allow sufficient time for such changes to occur.

Programming and the subsequent evaluation described in this document grew out of a request from a migrant health center for consultation from the University of North Carolina. The success of this project should encourage other migrant health centers to seek technical assistance from their local universities.

APPENDIX A
References

REFERENCES

American Academy of Pediatrics: Guidelines for health supervision. Evanston, IL. 1985.

Cottrell, L.: The competent community. In Further explorations in social psychiatry, edited by B. Kaplan, R. Wilson, and A. Leighton. Basic Books, New York, 1976, 195-209.

Friere, P.: Education for critical consciousness. Seabury Press, New York, 1973.

Garrett, P. and Schulman, M.D.: Migrant and seasonal farmworkers in North Carolina: A report based on the analysis of existing data. A report for the North Carolina Primary Health Care Association. Cary, North Carolina, July 1988.

Giblin, P.T.: Effectiveness utilization and evaluation of indigenous health care workers. Public Health Rep 104: 361-367, July-August 1989.

Greenwald, P. and Cullen, J.: The new emphasis in cancer control. J Natl Cancer Inst, 74: 545-551, March 1985.

Guendelman, S., Gould, J., Hudes,M., Eskenazi, B.: Generational differences in perinatal health among the Mexican American population: Findings from HHANES 1982-84. Am J Public Health 80:61-65, December 1990 supplement.

Heins, H.C., Nance, N.W, and Ferguson, J.E.: Social support in improving perinatal outcome: The Resource Mothers Program. Obstet Gynecol 70: 263-266, August 1970.

Hingson, R. and Lin, N.: Communication participation and individual receptivity to health innovations. Int J Health Ed 16:5-14 (1973).

Israel, B.A.: Community-based social network interventions: meeting the needs of the elderly. Dan Med Bull. Special Supplement Series 6:36-44, October 1988.

Kessner, D.M., Singer, J., Kalk, C., and Slesinger, E.: Infant death: An analysis by maternal risk and health care. Institute of Medicine, National Academy of Sciences, Washington, D.C., 1973.

Levin, L. S. and Idler, E.L: The impact of mediating structures of health and illness. In The hidden health care system: Mediating structures and medicine, edited by L. S. Levin. Ballinger Publishing Co., Massachusetts, 1981, pp. 5-54.

Littlefield, C.N., Stout, C.L., and Ramirez-Flores, P.: Family planning for migrant farmworkers of Mexican cultures: A framework for action. Colorado Community Health Network, Inc., Denver, February 1986.

Marcos, L.R.: Culture, language, and communicative behavior - The psychiatric examination of Spanish Americans. In Latino language and communicative behavior, Vol. 6 of Advances in Discourse Processes, edited by R. P. Duran. Ablex Publishing Corp., Norwood, N.J., 1981, pp. 187-194.

North Carolina Division of Health Services: Recommendations for the child health program. North Carolina Department of Human Resources, Division of Health Services, Maternal and Child Health Branch, Raleigh, N.C., 1986.

Quesada, G.M.: Language and communication barriers for health care delivery to a minority group. Soc Sci Med 10:323-327, June 1976.

Service, C. and Salber, E.: Community health education: The lay health advisor approach. Health Care Systems, Durham, NC , 1979.

Slesinger, D.P.: Health needs of migrant workers in Wisconsin. Department of Rural Sociology, University Extension, Madison, WI, 1979.

Smith, J.C., Warren, C.W., and Garcia-Nunez, J.: The U.S. - Mexico border: contraceptive use and maternal health care in perspective, 1979. The United States - Mexico Border Health Association, El Paso, TX, 1983.

Watkins, E. et al.: Improving the health of migrant mothers and children. Final report of SPRANS Grant MCJ373415. Department of Maternal and Child Health, School of Public Health, University of North Carolina at Chapel Hill, December 31, 1988.

APPENDIX B
Tables

Table 1

Prenatal Population: Ethnic Characteristics (Percentages)

Ethnic Group	1988 Control (n=81)	1988 Intervention (n=228)	1988 All (n=309)	1989 Control (n=84)	1989 Intervention (=244)	1989 All (n=328)
Hispanic	80	82	81	94	87	89
American Black	1	10	8	1	9	7
White	16	5	8	5	3	3
Haitian/ Native Americans	3	3	3	0	1	1
Total	100	100	100	100	100	100

Table 2

Newborn and Infant Population: Ethnic Characteristics (Percentages)

Ethnic Group	1988 Control (n=93)	1988 Intervention (n=163)	1988 All (n=256)	1989 Control (n=25)	1989 Intervention (n=106)	1989 All (n=131)
Hispanic	93	83	87	92	93	93
American Black	2	12	8	4	7	6
White	5	4	4	4	0	1
Haitian/ Native American	0	1	1	0	0	0
Total	100	100	100	100	100	100

Table 3

Hispanic Prenatal Population:
Occupational Status (Percentages)

Occupation	1988[1] Control (n=65)	1988[1] Intervention (n=187)	1988[1] All (n=252)	1989 Control (n=79)	1989 Intervention (n=211)	1989 All (n=290)
Field Work	25	53	46	27	33	32
Other	25	20	21	15	11	12
Unemployed	50	27	33	58	56	56
Total	100	100	100	100	100	100

[1]Fisher's 2-sided Exact test, p<.0001; tests difference in occupation between sites in 1988.

Table 4

Hispanic Prenatal Population:
Number of Social Problems (Percentages)

Number of Problems	1988[1] Control (n=65)	1988[1] Intervention (n=187)	1988[1] All (n=252)	1989[2] Control (n=79)	1989[2] Intervention (n=211)	1989[2] All (n=290)
0	71	69	69	52	70	66
1	12	26	23	25	19	21
2	11	4	6	14	8	9
3+	6	1	2	9	3	4
Total	100	100	100	100	100	100

[1]Fisher's 2-sided Exact test, p=.0011; tests difference in number of problems between sites in 1988.
[2]Fisher's 2-sided Exact test, p=.0082; tests difference in number of problems between sites in 1989.

Table 5

Hispanic Prenatal Population:
Years of Age (Percentages)

Years of Age	1988 Control (n=65)	1988 Intervention (n=187)	1988 All (n=252)	1989 Control (n=79)	1989 Intervention (n=211)	1989 All (n=290)
< 20	23	29	28	27	30	29
20-29	65	62	62	61	60	60
30-39	12	8	9	10	9	10
40+	0	1	1	2	1	1
Total	100	100	100	100	100	100

Table 6

Hispanic Prenatal Population:
Years of Education Completed (Percentages)

Years of Education	1988 Control (n=61)	1988 Intervention (n=165)	1988 All[1] (n=226)	1989 Control (n=72)	1989 Intervention (n=197)	1989 All[2] (n=269)
0	5	5	5	6	9	8
1-6	41	50	47	49	49	49
7-11	41	39	40	30	37	35
12+	13	6	8	15	5	8
Total	100	100	100	100	100	100

[1] Data missing on 4 control and 22 intervention prenatal patients.
[2] Data missing on 7 control and 14 intervention prenatal patients.

Table 7

Hispanic Prenatal Population:
Marital Status at Time of Pregnancy (Percentages)

Marital Status	1988 Control (n=65)	1988 Intervention (n=187)	1988 All (n=252)	1989[1] Control (n=79)	1989[1] Intervention (n=211)	1989[1] All (n=290)
Single[2]	29	23	24	38	24	28
Married	69	77	75	62	76	72
Other	2	0	1	0	0	0
Total	100	100	100	100	100	100

[1]Fisher's 2-sided Exact test, p=.0267; tests difference in marital status between sites in 1989.
[2]Single includes never married, separated, and divorced.

Table 8 Hispanic Newborn and Infant Population: Age at First Visit (Percentages)

1988 Infants and Newborns[1]

Age in Months	Infants			Newborns			Infants and Newborns		
	Control (n=65)	Intervention (n=94)	All (n=159)[2]	Control (n=21)	Intervention (n=42)	All (n=63)	Control (n=86)	Intervention (n=136)	All (n=222)[1]
0-1	9	18	14	86	62	70	28	32	30
1-2	32	19	25	0	38	25	24	25	25
3-4	17	14	15	5	0	2	14	10	11
5-6	17	19	18	0	0	0	13	13	13
7-9	22	22	22	9	0	3	19	15	17
10+	3	8	6	0	0	0	2	5	4
Total	100	100	100	100	100	100	100	100	100

[1] Mantel-Haenszel test Q_S=44. 538 with 1 df, p<.001.
[2] Age of one intervention infant not recorded on clinic record.

1989 Newborns

Months of Age	Control (n=23)	Intervention (n=99)	All (n=122)
0-1	69	69	69
1-2	13	17	16
3-4	9	7	7
5-6	9	6	7
7-9	0	1	1
10+	0	0	0
Total	100	100	100

Table 9

Hispanic Prenatal Population:
Trimester Initiated Prenatal Care (Percentages)

Trimester	1988 Control (n=65)	1988 Intervention (n=187)	1988 All (n=252)	1989 Control (n=79)	1989 Intervention (n=211)	1989 All (n=290)
First (<15 wks)	43	40	41	42	45	44
Second (<15-27 wks)	45	40	41	37	35	35
Third (28 wks)	12	20	18	21	20	21
Total	100	100	100	100	100	100

Table 10

Hispanic Prenatal Population:
Outcome of Pregnancy (Percentages)

Outcome of Pregnancy	1988 Control (n=51)	1988 Intervention (n=140)	1988 All (n=191)[1]	1989 Control (n=61)	1989 Intervention (n=171)	1989 All (n=232)[2]
Livebirth	100.0	95.7	96.9	95.1	91.8	92.7
Stillbirth	0.0	1.4	1.0	0.0	1.8	1.3
Therapeutic abortion	0.0	0.0	0.0	0.0	0.6	0.4
Spontaneous abortion	0.0	2.2	1.6	4.9	5.8	5.6
Ectopic Pregnancy	0.0	0.7	0.5	0.0	0.0	0.0
Total	100.0	100.0	100	100.0	100.0	100.0

[1]Data missing on 14 control and 47 intervention prenatal patients.
[2]Data missing on 18 control and 40 intervention prenatal patients.

Table 11

Hispanic Prenatal Population: Adequate Number of Prenatal Visits (Percentages)

Nine or more Visits	1988 Control (n=51)	1988 Intervention (n=134)	1988 All (n=185)[1]	1989 Control (n=58)	1989 Intervention (n=157)	1989 All (n=215)[2]
Yes	51	46	47	48	43	44
No	49	54	53	52	57	56
Total	100	100	100	100	100	100

n= women reported as having livebirths only.

[1]Data missing on 14 control and 51 intervention prenatal patients.
[2] Data missing on 21 control and 51 intervention prenatal patients

Table 12

Hispanic Prenatal Population: Returned for Postpartum Visit (Percentages)

Postpartum Visit	1988 Control (n=51)	1988 Intervention (n=141)	1988 All[1] (n=192)	1989 Control (n=61)	1989 Intervention (n=171)	1989 All (n=232)
Yes	53	63	60	67	73	71
No/Unknown[2]	47	37	40	33	27	29
Total	100	100	100	100	100	100

[1]One intervention prenatal patient had unavailable pregnancy outcome, but had known postpartum visit information.
[2]Unknown = known pregnancy outcome, but postpartum visit status is unknown (i.e. not lost to follow-up).

Table 13

Hispanic Prenatal Population:
Postpartum Papanicolaou Test (Percentages)

Postpartum Papanicolaou Test	1988 Control (n=51)	1988 Intervention (n=141)	1988 All[1] (n=192)	1989 Control (n=61)	1989 Intervention (n=171)	1989 All (n=232)
Yes or NA[2]	73	82	80	61	73	69
No	27	18	20	39	27	31
Total	100	100	100	100	100	100

[1]One intervention prenatal patient had unavailable pregnancy outcome, but had known postpartum visit information.
[2]NA = had previous Papanicolaou test within 4 months of postpartum visit.

Table 14

Hispanic Prenatal Population:
Percentage of Women with Postpartum Visit
Deciding on Contraceptive Use

Use of Contraceptives	1988 Control (n=26)	1988 Intervention (n=84)	1988 All[1] (n=110)	1989 Control (n=41)	1989 Intervention (n=123)	1989 All[2] (n=164)
Yes	100	95	96	93	93	93
No	0	5	4	7	7	7
Total	100	100	100	100	100	100

n= number of prenatals who had a postpartum visit ("yes's" from Table 18).

[1]Data missing on 5 intervention and 1 control prenatal patients.
[2]Data missing on 1 intervention prenatal patient.

Table 15

Hispanic Prenatal Population:
Selection of Oral Method of Contraception (Percentages)

Selected Oral Contraceptives	1988 Control (n=26)	1988 Intervention (n=80)	1988 All (n=106)	1989 Control (n=38)	1989 Intervention (n=115)	1989 All (n=153)
Yes	69	79	76	74	82	80
No	31	21	24	26	18	20
Total	100	100	100	100	100	100

n= number of prenatals who had a postpartum visit and who used contraceptives ("yes's" from Table 14).

Table 16

Hispanic Prenatal Population:
Proportion Who Ever Carried Record Pouch to Clinic

Record Pouch Carried to Clinic	1988[1] Control (n=65)	1988[1] Intervention (n=187)	1988[1] All (n=252)	1989 Control (n=79)	1989 Intervention (n=211)	1989 All (n=290)
Yes	35	50	46	29	33	32
No	65	50	54	71	67	68
Total	100	100	100	100	100	100

[1]Fisher's 2-sided Exact test, p=.0437; tests difference in carrying pouch between sites in 1988.

Table 17

Hispanic Newborn and Infant: Number of Well Child or Well Child-Sick Child Visits by Six Months of Age (Percentages)

No. of Visits	Infants 1988			Newborns 1988			Newborns 1989		
	Control (n=53)	Intervention (n=72)	All (n=125)	Control (n=19)	Intervention (n=42)	All (n=61)	Control (n=23)	Intervention (n=98)	All (n=121)
0	17	8	12	5	0	2	13	4	6
1	47	46	46	32	38	36	35	41	40
2	25	23	24	26	29	28	22	28	26
3	11	10	10	26	14	18	22	13	15
4	0	10	6	11	5	6	4	9	8
5	0	3	2	0	7	5	4	5	5
6	0	0	0	0	7	5	0	0	0
Total	100	100	100	100	100	100	100	100	100

Table 18

Hispanic Newborn and Infant Population: Number of Well Child or Well Child-Sick Child Visits by Twelve Months of Age (Percentages)

No. of Visits	Infants 1988 Control (n=65)	Infants 1988 Intervention (n=95)	Infants 1988 All (n=160)	Newborns 1988 Control (n=21)	Newborns 1988 Intervention (n=42)	Newborns 1988 All (n=63)	Newborns 1989 Control (n=23)	Newborns 1989 Intervention (n=99)	Newborns 1989 All (n=122)
0	18	12	14	5	0	2	13	4	6
1	49	51	50	33	38	36	26	40	37
2	22	21	21	29	29	29	31	24	25
3	11	7	9	24	14	17	22	16	17
4	0	7	5	9	5	6	4	7	7
5	0	2	1	0	7	5	0	7	6
6	0	0	0	0	7	5	4	2	2
Total	100	100	100	100	100	100	100	100	100

Table 19

Hispanic Newborn and Infant Population:
Mother Carried MCH Pouch to Clinic (Percentages)

Carried MCH Pouch	1988[1] Control (n=86)	Intervention (n=137)	All (n=223)	1989 Control (n=23)	Intervention (n=99)	All (n=122)
Yes	12	29	22	4	8	7
No	88	71	78	96	92	93
Total	100	100	100	100	100	100

[1] Fisher's 2-sided Exact test, p=.003; tests difference in carrying pouch between sites in 1988.

Table 20

Hispanic Prenatal Population:
Mean Gravidity, Parity and Number of Living Children

Variable	1988 Control (n=65)	Intervention (n=187)	All (n=252)	1989 Control (n=79)	Intervention (n=211)	All (n=290)
Gravidity	2.9	2.8	2.8	2.9	2.7	2.8
Parity	1.6	1.6	1.6	1.6	1.5	1.5
No. of Living Children	1.6	1.5	1.6	1.6	1.4	1.5

Table 21

Hispanic Prenatal Population: Obstetrical History
Number of Previous Fetal Loss (Percentages)

Fetal Loss	1988[1] Control (n=65)	1988[1] Intervention (n=187)	1988[1] All (n=252)	1989 Control (n=79)	1989 Intervention (n=211)	1989 All (n=290)
0	83	82	82	86	86	86
1	12	18	16	10	10	10
2	3	0	1	3	2	2
3+	2	0	1	1	2	2
Total	100	100	100	100	100	100

[1]Fisher's 2-sided Exact test, p=.0253; tests difference in fetal loss between sites in 1988.

Table 22

Hispanic Prenatal Population:
History of Low Birthweight Infants (Percentages)

No. of Low birthweight Infants	1988 Control (n=65)	1988 Intervention (n=187)	1988 All (n=252)	1989 Control (n=79)	1989 Intervention (n=211)	1989 All (n=290)
0	92.3	94.1	93.6	92.4	95.2	94.5
1	7.7	3.8	4.8	6.3	3.8	4.5
2	0.0	1.6	1.2	0.0	0.5	0.3
3+	0.0	0.5	0.4	1.3	0.5	0.7
Total	100.0	100.0	100.0	100.0	100.0	100.0

Table 23

Hispanic Prenatal Population: Obstetrical History Neonatal and Postneonatal Deaths (Percentages)

Neonatal and Postneonatal Deaths	1988 Control (n=65)	1988 Intervention (n=187)	1988 All (n=252)	1989 Control (n=79)	1989 Intervention (n=211)	1989 All (n=290)
0	94	97	96	97	96	96
1	6	2	3	3	3	3
2+	0	1	1	0	1	1
Total	100	100	100	100	100	100

Table 24

Hispanic Prenatal Population: Hematocrit/Hemoglobin at First Visit in North Carolina (Percentages)

Hematocrit/ Hemoglobin Level	1988 Control (n=64)	1988 Intervention (n=186)	1988 All (n=250)[1]	1989 Control (n=79)	1989 Intervention (n=208)	1989 All (n=287)[2]
Low[3]	23	42	37	23	30	28
Normal[4]	77	58	63	77	70	72
Total	100	100	100	100	100	100

[1]Data missing on 1 control and 1 intervention prenatal patients.
[2]Data missing on 3 intervention prenatal patients.
[3]Low = Hematocrit $\leq$ 34%; Hemoglobin $\leq$ 11%.
[4]Normal = Hematocrit > 34%; Hemoglobin > 11%.

Table 25

Hispanic Prenatal Population: Pregnancy Related Illnesses (Percentages)

Illness	1988 Control (n=65)	1988 Intervention (n=187)	1988 All (n=252)	1989 Control (n=79)	1989 Intervention (n=211)	1989 All (n=290)
Yes	26	32	30	23	29	28
No/unknown	74	68	70	77	71	72
Total	100	100	100	100	100	100

Pregnancy related illness includes hypertension, pre-eclampsia, pregnancy induced hypertension, diabetes, gestational diabetes, urinary tract infection, sexually transmitted diseases, and tuberculosis (Tbc).

(1988 data includes positive PPD test and definite diagnosis of Tbc; 1989 includes confirmed diagnosis of Tbc only).

Table 26

Hispanic Newborn and Infant Population: Distribution of Low and Normal Birthweight (Percentages)

Birthweight	1988 Control (n=47)	1988 Intervention (n=133)	1988 All (n=180)[1]	1989 Control (n=57)	1989 Intervention (n=148)	1989 All (n=212)[2]
≤ 2,500 gms	2	5	4	0	5	3
> 2,500 gms	98	95	96	100	95	97
Total	100	100	100	100	100	100

n= known livebirths to Hispanic prenatal population and known birthweight of Hispanic infants whose mothers did not receive care on the project.

[1]Data missing on 4 control and 1 intervention children.
[2]Data missing on 1 control and 2 intervention children.

Table 29

Hispanic Newborn and Infant Population: Sick Child Visits by Age Bands (Percentages)

1988 Infants

Age Band	Control				Intervention				Overall Total			
		Visits				Visits				Visits		
Mos.	n	0	1	2+	n	0	1	2+	n	0	1	2+
0-1	65	97	3	0	95	94	6	0	160	95	5	0
1-2	63	85	13	2	92	91	9	0	155	89	10	1
3-4	51	74	22	4	81	85	9	6	132	81	14	5
5-6	38	73	24	3	71	80	16	4	109	78	18	4
7-9	31	35	52	13	50	54	36	10	81	47	42	11
10-12*	9	22	56	22	21	43	48	9	30	37	50	13

1988 Newborns[1]

Age Band	Control				Intervention				Overall Total			
		Visits				Visits				Visits		
Mos.	n	0	1	2+	n	0	1	2+	n	0	1	2+
0-1	21	81	19	0	42	93	7	0	63	89	11	0
1-2	16	56	25	19	34	71	26	3	50	66	26	8
3-4	14	79	14	7	25	72	24	4	39	74	21	5
5-6	12	67	33	0	20	85	15	0	32	78	22	0
7-9	10	30	40	30	20	55	35	10	30	46	37	17
10-13*	3	67	33	0	16	38	56	6	19	42	53	5

1989 Newborns[2]

Age Band	Control				Intervention				Overall Total			
		Visits				Visits				Visits		
Mos.	n	0	1	2+	n	0	1	2+	n	0	1	2+
0-1	23	56	35	9	99	86	13	1	122	80	17	2
1-2	19	53	37	10	81	79	19	2	100	74	22	4
3-4	14	64	29	7	53	79	17	4	67	76	19	5
5-6	9	67	22	11	37	73	22	5	46	72	22	6
7-9	4	50	50	0	21	52	43	5	25	52	44	4
10-12*	0	–	–	–	6	66	17	17	6	66	17	17

n= the number of children in the cohort when they were in each specific age band.

[1]Mantel-Haenszel test, p=.004; difference in number of sick child visits between sites adjusting for age bands and child status in 1988.

[2]Mantel-Haenszel test, p=.001; difference in number of sick child visits between sites adjusting for age bands and child status in 1989.

Visits counted as zero visits in age bands before known visit was made, so that at 0-1 month age band equals total number of children.

Pretest/Posttest of Knowledge and Attitudes

Name_____ Date of Birth_____
Interviewer's ID#_____Respondent ID#_____ Interview Date_____

1.	A baby who is 9 months old should stop formula and start drinking cow's milk.	T/F DK (Don't Know)
2.	A baby usually begins to walk alone at 5 months.	T/F DK
3.	Speaking in a loud voice and spanking your child when he is bad is the best way to make him behave.	T/F DK
4.	Letting a baby go to sleep with a bottle in his mouth can be harmful.	T/F DK
5.	If a baby who is breastfed cries to be fed every 1-2 hours, it means he isn't getting enough to eat.	T/F DK
6.	A chubby baby is always a healthy baby.	T/F DK
7.	It is better to give a baby too many immunizations than not enough.	T/F DK

Please ask for short answer responses. (note: answers to the right are for coding only, do not prompt with responses listed).

8.	When should a newborn go for his first medical check-up?	A. Birth-1 month B. _____
9.	Are there circumstances when a husband would have the right to hit his wife?	A. Never B. _____
10.	Name 2 contraceptive methods you can use to plan your family.	A. _____ B. _____
11.	At what month of pregnancy should a woman first visit a doctor?	A. Within first 3 months B. _____
12.	What is a Pap test?	A. Test for cancer of the cervix. B. _____
13.	What is the WIC program?	A. Food for pregnant women and children B. _____
14.	If your newborn infant has diarrhea, what should you do?	A. Take him to doctor B. _____

15. How can an infant be protected from a car accident?
   A. Car seat
   B. _____

16. If a woman is abused by her husband, who can she go to for help?
   A. Police
   B. Clinic
   C. Social worker
   D. Friend
   E. _____

17. Why should a woman examine her breasts?
   A. Check for unusual lumps
   B. Screen for cancer
   C. _____

18. What are two things you can do to prevent your family from becoming sick from the chemicals that the growers put on their crops?
   A. Wash clothes separately
   B. Wash hands before eating
   C. Don't use pesticides containers
   D. Don't allow children to play in fields.
   E. _____

19. Why is it important for you to carry your medical records?
   A. To help the clinic with your care.
   B. _____

Note: This question was asked to assist with recruitment.

Can you tell me the name of a friend or family member with whom you feel comfortable asking help or information about the health of your children or yourself? (Please indicate below where this person lives).

Pretest/Posttest of Knowledge and Attitudes (Spanish)

Name_____ Date of Birth_____
Interviewer's ID#_____Respondents ID#_____ Interview Date_____

Responde si o no.

1.	Un bebe de nueve meses de edad deberia dejar de tomar la formula y empezar a tomar la leche de vaca.	T/F DK (Don't know)
2.	Un bebe normalmente empieza a caminar solo a los cinco meses de edad.	T/F DK
3.	Hablando fuertemente y pegando a su nino cuando se porta mal es la mejor manera para hacerlo portarse bien.	T/F DK
4.	Dejar dormir su bebe con un biberon en su boca puede hacerlo dano.	T/F DK
5.	Si un bebe amamantado llora para ser alimentado cada 1-2 horas quiere decir que no esta recibiendo suficiente alimento.	T/F DK
6.	Un bebe gordito es siempre un bebe saludable. (sano)	T/F DK
7.	Es mejor dar al bebe demasiadas vacunas que no suficientes.	T/F DK

Please ask for short answer responses (note: answers to right are for coding only, do not prompt with responses listed).

8.	Cuando deberia ir un recien nacido a su primer cheqeo medico?	A. Birth-1 month B. _____
9.	Existe circumstancias cuando tiene un esposo el derecho de golpear a su esposa?	A. Never B. _____
10.	Nombre dos metodos anticonceptivos para planificar el tamano de su familia	A. _____ B. _____
11.	En que mes del embarazo deberia ir una mujer a su primer cheqeo medico?	A. Within first 3 months B. _____
12.	Para que sirve la prueba Pap (Papanicolau)	A. Test for cancer of the cervix B. _____

13. Puedes explicarme como es el programa de WIC?
    - A. Food for pregnant women and children
    - B. _____

14. Si su recien nacido tiene diarrea, que se debe hacer uno?
    - A. Take him to the doctor
    - B. _____

15. Como puede uno proteger a su bebe de accidentes del carro?
    - A. Car seat
    - B. _____

16. Si una mujer es abusada, donde puede ella ir para obtener ayuda?
    - A. Police
    - B. Clinic
    - C. Social worker
    - D. Friend
    - E. _____

17. Porque deberia una mujer examinar sus senos?
    - A. Check for unusual lumps
    - B. Screen for cancer
    - C. _____

18. Cuales son dos cosas que uno puede hacer para su familia para evitar de que se enferman de las pesticidas (venenos agricolos), que se hechen, los patrones, en los fildes?
    - A. Wash clothes separately
    - B. Wash hands before eating
    - C. Don't use pesticide containers
    - D. Don't allow children to play in fields.
    - E. _____

19. Porque es importante llevar los recordes medicos por si misma?
    - A. To help the clinic with your care
    - B. _____

Note: This question was asked to assist with recruitment.

Puedes decidirme el nombre de una amiga o una familiare en que tienes confianza para pedir ayuda o informacion sobre la salud de sus ninos o si misma? (Please indicate below where this person lives).

_____

_____

Exposure Questionnaire

Name_____ Date of Birth_____
Interviewer ID#_____ Respondent ID#_____ Interview Date_____

1. **Hello, my name is_____and I am working with a mother and child health program for migrant farmworkers like yourself. Some special women have been trained as lay health advisors and we would like to know if you know any of them. [Read the names and show photos. If she doesn't know any of them, skip to number 3]**

[Write down the code numbers of each LHA identified]

2. Which of these women were ones who helped you?
   First LHA:_____
   Second LHA:_____
   Third LHA:_____

[Show the LHA button and ask:]

3. Have you ever seen them or other women wearing a button like this one?
   1 Yes
   2 No (if doesn't know any LHAs, stop here and thank her).

4. Why do women wear it?
   1 She's a lay health advisor
   2 Don't know

[Referring to #2]

5. How many of them are a member of your family?_____
6. How many of them are a good friend?_____
7. How many of them are just an acquaintance?_____

Helping Content

8. Did any of these women help you with any of the following things?

	Yes	No
Well child care	1	2
Childhood illnesses	1	2
Immunizations	1	2
Accident prevention	1	2
Breastfeeding	1	2
Nutrition/WIC	1	2
Family planning	1	2
Tests for cancer	1	2
STDs	1	2
Prenatal care	1	2
Postpartum care	1	2
Headstart/school	1	2
Family problems	1	2
Pesticides	1	2
Dental care	1	2
Other _____	1	2

9. About how many times did you talk to them about this problem?
   1 A lot (> 5 times)
   2 A few times (2-5 times)
   3 Once

10. Please tell me all the different places where you usually see these women.

	Yes	No
In your camp/home	1	2
In someone elses camp	1	2
At the clinic/health dept	1	2
At church	1	2
At Headstart/school	1	2
At the store/laundromat	1	2
At the movies/dances	1	2
Where you work	1	2
Other_____	1	2

Appropriateness of Helping

11. What did they suggest be done?_____

_____

Accuracy:
1=Completely
2=Partly
3=None
4=N/A

Satisfaction

12. As a result of all these things they did to help you, what did you end up doing?

_____

_____

Effectiveness:
1=Completely
2=Partly
3=None
4=N/A

13. Would you go to them for help again?
   1 Yes
   2 No
   8 Not sure

14. Would you recommend them to others needing help?
    1 Yes
    2 No
    8 Not sure

Social Support

15. How much assistance did they give for things like transportation, loaning money, translation, child care?
    1 A lot
    2 Some
    3 None

16. How much information about community services did they give you?
    1 A lot
    2 Some
    3 None

17. How much sympathy or concern did they give you?
    1 A lot
    2 Some
    3 None

18. How much did they teach you about things you can do yourself?
    1 A lot
    2 Some
    3 None

When the responses describing the help of all LHAs have been recorded, thank respondent for taking the time to answer these questions. Ask her if there is anything else she wants to say or ask about what Lay Health Advisors do. Note the comments here.

Exposure Questionnaire (Spanish)

Name _____ Date of Birth _____
Interviewer ID#_____ Respondent ID#_____ Interview Date_____

1. Buenos Dias, Me llamo _____y estoy trabajando con un programa de salud para gente migrante como usted. Hay algunas senoras especiales quien son promotoras de salud. Por favor digame si usted concoce alguna. [Read the names and show photos. If she doesn't know any of them, skip to number 3]

[Write down the code numbers of each LHA identified]

2. Indicame cuales de estas mujeres le ayudaron?
   First LHA:_____
   Second LHA:_____
   Third LHA:_____

[Show the LHA button and ask:]

3. Ha visto usted a ellas o otras mujeres con un boton como este?
   1 Si
   2 No (if doesn't know any LHA stop here and thank her)

4. Por que lo tienen?
   1 Es una promotora de salud
   2 No sabe

[Referring to #2]

5. Cuantas son miembros de su familia?_____
6. Cuantas son buenas amigas?_____
7. Cuantas son unas conocidas no mas?_____

Helping Content

8. Le ayudaron con algo de lo siguiente?

	Si	No
Cuidado de ninos sanos	1	2
Enfermedades del ninez	1	2
Vacunas	1	2
Prevencion de accidentes	1	2
Dando pecho	1	2
Nutricion/los cupones	1	2
Planificacion familiar	1	2
Pruebas de cancer	1	2
Enfermedades venereas	1	2
Cuidado prenatal	1	2
Cuidado despues del parto	1	2
La escuelita [Headstart]/la escuela	1	2
Problemas familiares	1	2
Venenos agricolas	1	2
Cuidado de los dientes	1	2
Otro_____	1	2

9. Como cuantas veces le hablaron a usted acerca de estos problemas?
   1 Muchas veces (> 5 times)
   2 Pocas veces (2-5 times)
   3 Una vez

10. Por favor digame todos los lugares donde usted normalmente les ve a estas senoras.

	Si	No
En su campamento/casa	1	2
En el campamento de otra	1	2
En la clinica/depto de salud	1	2
En la iglesia	1	2
En la escuelita (Headstart)/escuela	1	2
En la tienda o lavanderia	1	2
En el cine o en los bailes	1	2
Donde usted trabaja	1	2
Otro _____	1	2

Appropriateness of Helping

11. Que sugerieron hacer? _____

_____

Accuracy:
1=Completely
2=Partly
3=None
4=N/A

Satisfaction

12. Como resultado de todas estas cosas que ellas hizieron para ayudarle, que hizo usted?

_____

_____

Effectiveness:
1=Completely
2=Partly
3=None
4=N/A

13. Iria usted a ellas por ayuda otra vez?
   1 Si
   2 No
   3 No esta segura

14. Las recomendarias a otras que necesiten ayuda?
    1 Si
    2 No
    3 No esta segura

Social Support

15. Cuanta ayuda recibiste por cosas tal como transportacion, prestar dinero, traducir y cuidado para el nino?
    1 Mucho
    2 Poco
    3 Nada

16. Cuanta informacion recibiste sobre servicios de la comunidad?
    1 Mucho
    2 Poco
    3 Nada

17. Cuanto interes o apoyo recibiste?
    1 Mucho
    2 Poco
    3 Nada

18. Cuanto aprendiste sobre cosas que puedes hacer por ti misma?
    1 Mucho
    2 Poco
    3 Nada

When the reponses describing the help of all LHAs have been recorded, thank respondent for taking the time to answer these questions. Ask her if there is anything else she wants to say or ask about what Lay Health Advisors do. Note the comments here.

Helping Contacts

Name_____ Date of Birth_____
Interviewer ID#_____Respondent ID#_____ Interview Date_____

After participating in the LHA program, we would like to ask you some questions about ways you have given advice or help to other people.

1. How many people have you helped during the last week:
   Men _____
   Women_____
   Both _____

		Yes	No
2.	Are they members of your family	1	2
3.	Are they good friends	1	2
4.	Are they just acquaintances	1	2
5.	Are they other LHAs	1	2

6. Tell me where you normally see these people:

	Yes	No
In your camp or home	1	2
In someone else's camp or home	1	2
At the clinic or Health Dept.	1	2
At church	1	2
At Headstart or school	1	2
At a store or laundromat	1	2
At the movies or a dance	1	2
At work	1	2
Other_____	1	2

7. Did you help them with the following:

	Yes	No
Well child care	1	2
Childhood illnesses	1	2
Immunizations	1	2
Accident prevention	1	2
Breastfeeding	1	2
Nutrition/WIC	1	2
Family planning	1	2
Tests for cancer	1	2
STDs	1	2
Prenatal care	1	2
Postpartum care	1	2
Headstart/school	1	2
Family problems	1	2
Pesticides	1	2
Dental care	1	2
Other _____	1	2

8. What did you do for them:

	Yes	No
Give advice or information	1	2
Loan money	1	2
Child care	1	2
Provide transportation	1	2
Translate	1	2
Give pamphlets or other materials	1	2
Refer to professional or agency	1	2
Other_____	1	2

9. What did you suggest they do?

_____

Accuracy:
1=Completely
2=Partly
3=None
4=N/A

10. As a result of all the things you did to help these people, what did they do?

_____

Effectiveness:
1=Completely
2=Partly
3=None
4=N/A

	Yes	No
11. Do you believe that you were able to help these people?	1	2

Thank the LHA for answering these questions and ask if there is anything else she would like to say about her helping contacts. Note comments here.

Helping Contacts (Spanish)

Name_____ Date of Birth_____
Interviewer ID#_____Respondent ID# _____ Interview Date_____

Despues de participar en el programa de Promotoras de Salud, nos gustaria preguntarle sobre que clase de consejo o ayuda ha prestado a otras personas.

1. Cuantas personas ha ayudado Ud. durante las ultimas dos semanas.
   Hombres_____
   Mujeres_____
   Los dos_____

		Si	No
2.	Son miembros de su familia	1	2
3.	Son buenas amigas	1	2
4.	Son unas conocidas no mas	1	2
5.	Otra Promotora	1	2

6. Digame todos los lugares donde Ud. normalmente ve a estas personas:

	Si	No
En su campamento/casa	1	2
En el campamento de otra	1	2
En la clinica/depto de salud	1	2
En la iglesia	1	2
En la escuelita (Headstart)/escuela	1	2
En la tienda o lavanderia	1	2
En el cine o en los bailes	1	2
Donde Ud. trabaja	1	2
Otro_____	1	2

7. Les ayudo Ud. con algo de lo siguiente:

	Si	No
Cuidado de ninos sanos	1	2
Enfermedades del ninez	1	2
Vacunas	1	2
Prevencion de accidentes	1	2
Dando pecho	1	2
Nutricion/los cupones	1	2
Planificacion familiar	1	2
Pruebas de cancer	1	2
Enfermedades venereas	1	2
Cuidado prenatal	1	2
Cuidado despues del parto	1	2
La escuelita (Headstart)/escuela	1	2
Problemas familiares	1	2
Venenos agricolos	1	2
Cuidado de los dientes	1	2
Otro_____	1	2

8. Que hizo Ud. por ellas:

	Si	No
Dar consejos/informacion	1	2
Prestar dinero	1	2
Cuidar los ninos	1	2
Dar transporte	1	2
Interpretar	1	2
Ensenar folletos/otros materiales	1	2
Referido a un profesional/agencia	1	2
Otro_____	1	2

9. Que les sugerio Ud. hacer?

_____

Accuracy:
1=Completely
2=Partly
3=None
4=N/A

10. Como resultado de todas estas cosas que hizo Ud. para ayudar a estas personas, que hicieron ellas?

_____

Effectiveness:
1=Completely
2=Partly
3=None
4=N/A

	Si	No
11. Cree Ud. que les ayudo?	1	2

Thank the LHA for answering these questions and ask if there is anything else she would like to say about her helping contacts. Note comments here.

APPENDIX D
Consent Forms

Demonstration Project to Improve the Health
of Migrant Mothers and Children

Consent Form for Womem and Children
Participating in MIC Project

The University of North Carolina, School of Public Health and Duplin County Health Department are working cooperatively to improve the health care of farmworker women and children through the coordination of appropriate health services. This project will train migrant farmworker women in health promotion and disease prevention strategies to be disseminated among the migrant population.

1. This service is in keeping with accepted medical standards of care, and there will be no risks to me for participating in this service.

2. There will be access to medical records and any information about myself and family which is obtained from Duplin County Health Department or other agencies providing medical care will be kept confidential.

3. I am free to withdraw from receiving this service at any time and my refusal to participate will in no way jeopardize my receiving care in the future.

4. The service located at Duplin County Health Department Clinic may be of benefit to me and my family.

If I have questions about this project, I may call Kim Larson, Project Coordinator, at the School of Public Health, UNC, (919) 484-1331.

Witness _____ Date _____

Mother's Name _____ DOB _____ PN ____

Children _____ DOB _____

_____ _____

_____ _____

_____ _____

_____ _____

MATERNAL AND CHILD HEALTH MIGRANT PROJECT

AGREEMENT

Lay Health Advisor Program
Shiloh Migrant Head Start Center/ECMHSP

The purpose and plan of the Lay Health Health Advisor Program at Shiloh Head Start has been explained to me. I agree to participate in the program.

I understand that the classes will be held on Wednesday July 1, 8, 15, and 22 from 9 a.m. to 2:30 p.m. I understand that the classes will provide information about improving the health of myself and my children.

I understand, that if I need it, I will be given a ride, free, to and from Shiloh each Wednesday.

As part of the evaluation of the program, I agree to participate in an interview about my experiences in life and my thoughts about these classes. I understand that I will be given a copy of any cassette tape recorded of my interview, if I wish. I also agree to have photographs or video tapes taken of me or my family, as I participate in this program. I understand that my name and those of my family will be kept confidential.

I give permission to the Maternal and Child Health Migrant Project of the University of North Carolina to use these tapes, photographs, and video tapes to teach others and for research, unless I request that something specific, not be used.

I understand that if I don't like this program, I can stop going to classes and this will not affect the services that my family or I receive at Shiloh Head Start or Tri-county Community Health Center.

I understand that if I have any questions or concerns about this program that I may call: CHRISTINA HARLAN at Tri-County Community Health Center 567-6194.

I have read, or this agreement has been read to me in my language. I have been offered a copy of this agreement.

_____
Program Participant

_____
Date of Birth

I certify that this agreement has been read to, or read by, the participant in her language and she agrees to participate in this program.

_____	_____	_____
Witness	Date	Language

APPENDIX E
Recruiting Leaflet

MCH MIGRANT PROJECT

Lay Health Advisor Program
1989

Lay Health Advisors are women in the community who work in farmwork. These women are interested in learning more about the health of themselves and their children. They participate in a series of classes about how to improve their health. Afterward, they share what they have learned with their friends and families.

UNIVERSITY OF NORTH CAROLINA

PROYECTO MATERNO-INFANTIL

Programa Promotoras de Salud
1989

Promotoras de Salud son senoras de la communidad quienes trabajan en la "labor". Estas senoras tienen interes en aprender sobre la salud de ellas mismas y de sus ninos. Ellas asisten a platicas para aprender a promover la salud. Entonces, ellas comparten lo que han aprendido con sus amigas y familiares.

UNIVERSIDAD de CAROLINA del NORTE

APPENDIX F
Training Session Plans

Maternal and Child Health Migrant Project

LAY HEALTH ADVISOR PROGRAM

SESSION: Women's Health

TOPIC: Breast Self-Exam, PAP, STDs

CONTENT AND METHODS

A major underlying theme of the LHA program is to encourage women to see themselves as important members and contributors to their families and networks. This session is approached from the position that women must respect themselves and take care of themselves, first, in order to take care of their families. Women are taught the importance of doing the **breast exam** and have an opportunity to practice with breast models. The importance of a yearly **PAP** is discussed along with feelings about embarrassment and reluctance to having it done. Through this discussion women can talk about **body image** and **sense of self** in more physical terms. **STDs** including syphillis, gonorrhea, chlamydia and AIDS are discussed.

RELATED LEARNING

The Haitian women are reminded that many studies show that Carribean women are at increased risk for cervical cancer so the importance of a PAP is reinforced with this group.

AUDIO-VISUAL AND PRINTED MATERIALS

"Learn English and Improve Your Family's Health" (6,10)

Haitian booklets (20)

AIDS Videos (23,25)

Scriptographics booklet (28)

American Cancer Society (29)

Breast models (33), Speculum

"Los Microbios del Amor" (38)

Maternal and Child Health Migrant Project

LAY HEALTH ADVISOR PROGRAM

SESSION: Women's Health

TOPIC: Family Planning

CONTENT AND METHODS

Although all the sessions must show sensitivity to sociocultural differences the one on family planning may be the most sensitive issue of all those discussed. This session is centered on discussions about **"ideal" family size.** It is acknowledged that a definition as to what is ideal rests on religious beliefs as well as socio-economic forces within each culture. The other side of the coin is a critique of western medicine as an arm of racist ideology that pushes family planning as a way of reducing minority populations. Although, it is difficult, if not impossible to consider these contradictions within the context of the LHA program. Trainers must be aware of the issues as they approach the discussion of "ideal" families and the ability (due to technology) and the right of women to plan for the size of family they wish to have. Women are shown models of the different methods.

RELATED LEARNING

A discussion about uses and misuses of technology could also be part of this discussion. Although there are many new technologies available for family planning each has advantages and disadvantages. Women must assume rights and responsibilities for making choices based on available information in collaboration with important family members, such as husband or companion.

AUDIO-VISUAL AND PRINTED MATERIALS

"Contraception" (38)

"Learn English and Improve Your Family's Health" (6,10)

Haitian booklets (20)

Video in Haitian Creole on Family Planning (28)

Family Planning (CLEF Clinical Care Guidelines developed by MCN) (14)

Kit of Family Planning Models

Maternal and Child Health Migrant Project

LAY HEALTH ADVISOR PROGRAM

SESSION: Women's Health

TOPIC: Pregnancy and Childbirth

CONTENT AND METHODS

This session is approached from the position that **pregnancy** and **childbirth** are **normal processes** that need as little intervention as possible. Normal stages of pregnancy are discussed along with normal and abnormal discomforts. The importance of **routine prenatal care** is stressed. The important **role** of **family** and **friends** is also discussed as is the role of a support person during labor. Women are encouraged to talk about their own pregnancies and deliveries. Through discussion they are asked to discuss ways they can be helpful to friends or family during time of pregnancy, delivery, new parenthood, and infancy.

RELATED LEARNING

This session dove-tails with the one on nutrition during pregnancy, in discussing a balanced diet, problems with appetite or nausea and breast feeding.

AUDIO-VISUAL AND PRINTED MATERIALS

"Learn English and Improve your Family's Health" (6,10)

Haitian booklets (20)

How a Baby Grows: Developmental Timeline Chart (S/E) (37)

Maternal and Child Health Migrant Project

LAY HEALTH ADVISOR PROGRAM

SESSION: Child Health

TOPIC: Growth and Development

CONTENT AND METHODS

This session focuses on the importance of the parent-child relationship in promoting achievement of **developmental milestones**. Women are encouraged to discuss normal stages of development between the ages of birth to four years, identifying milestones and how to help children learn appropriate skills for age. Age-appropriate, low-cost play things for infants and toddlers are introduced. Materials are brought to class so that the women can participate in making some of these toys. **Immunizations, dental health** and **common concerns of child health** are discussed, using slide/tape presentations, observation of children at play and group discussion. Women are encouraged to discuss experiences with their own children as a way to acknowledge capabilities they already have.

RELATED LEARNING

This session dove-tails with the session on discipline and child abuse. Tips on lessening the need to discipline and manage unacceptable behavior within the context of G&D are discussed.

AUDIO-VISUAL AND PRINTED MATERIALS

Parent Education Project "La Familia y su Salud/Make Health a Family Affair" (5)

Haitian booklets (20)

"A Healthy Smile" (25)

Spanish Video: Your Baby's First Days (34)

MCH Project Growth Charts (20)

Age appropriate books/toys

Maternal and Child Health Migrant Project

LAY HEALTH ADVISOR PROGRAM

SESSION: Child Health

TOPIC: Childhood Illnesses

CONTENT AND METHODS

Using Growth and Development as a framework, this session focuses on **common childhood illnesses** and the importance of **immunizations**. Illnesses that can be prevented through immunization are differentiated from those that cannot be. Mothers are taught how to read a **thermometer**, and how to treat early stages of **diarrhea** and **dehydration**. Women are encouraged to talk about past experiences they have had with their own children and to talk through the process they used to decide whether to treat the child themselves or seek medical attention. The Hispanic and Haitian women are taught how to make **oral rehydration** solution, since it is known that many of them return at times to their native country. Because ORT solutions are not readily available in the US, the North American group is not taught to make it themselves.

RELATED LEARNING

This session dove-tails with both the G&D and Safety & Env. sessions, since issues of illness are described according to a developmental framework and information about diarrhea, dehydration, and parasites relates to environmental issues.

AUDIO-VISUAL AND PRINTED MATERIALS

Thermometers

"Learn English and Improve Your Family's Health" (6,10)

Haitian booklets (20)

Maternal and Child Health Migrant Project

LAY HEALTH ADVISOR PROGRAM

SESSION: Child Health

TOPIC: Safety and the Environment

CONTENT AND METHODS

This session, more than any other, encourages women to consider problems affecting the health of the children from a political-economic perspective. Women are asked to consider the situation on their camps in terms of possible **hazards** to the **health** and **safety** of their **children**. Through this discussion women become aware of the types of conditions that they themselves could improve in the environment, and what types of conditions are the responsibility of the grower. The women learn they have the right to seek assistance from the health department or legal services when the grower does not comply with requests for improvements. **Accident prevention, parasites,** and **pesticides** are emphasized as problems particularly important to migrants.

RELATED LEARNING

This session dove-tails with G&D in considering safety in terms of the developmental stage of the child. It also dove-tails with Childhood Illnessess in the discussion about hygiene and parasites.

AUDIO-VISUAL AND PRINTED MATERIALS

Safety for Your Child's Sake (3)

Haitian booklets (20)

Poison Prevention (26)

Farmworker Pesticide Safety Program (27)

Spanish Video: Childhood Safety (34)

Maternal and Child Health Migrant Project

LAY HEALTH ADVISOR PROGRAM

SESSION: Nutrition

TOPIC: Breast Feeding

CONTENT AND METHODS

Breast feeding rates among Mexican-American women are below average for the nation. For migrant farmworker women, **breastmilk** offers **important health advantages** to their infants. This session on breastfeeding focuses on these advantages. Women are urged to discuss their own experiences with breastfeeding and to share with others in the group who have not breastfed an infant. A skit is used as a discussion starter. It features two women in the health center waiting room, waiting to have their newborns seen by a doctor. The women share their experiences, one bottle feeding and the other breastfeeding. Afterwards, women are encouraged to discuss issues raised in the skit. Attitudes of husband and other family members are discussed, feelings of modesty, as well as decisions about returning to work.

RELATED LEARNING

This session dove-tails with the session on Child Health and Pregnancy & Childbirth. As with these other sessions, breastfeeding is presented as a natural process that is beneficial to both mother and child.

AUDIO-VISUAL AND PRINTED MATERIALS

"Algo Maravillosa para Dos" (5)

"Learning English and Improving Your Family's Health" (6,10)

Breastfeeding skit, developed by MCH Migrant Project Nutritionist (see appendix)

Haitian booklets (20)

Breastfeeding Counseling Guide (39)

Nursing bra and Nightgown

Maternal and Child Health Migrant Project

LAY HEALTH ADVISOR PROGRAM

SESSION: Nutrition

TOPIC: Infant and Toddler Feeding

CONTENT AND METHODS

Using growth and development milestones as a framework, women are encouraged to discuss appropriate feeding for their infants and toddlers. **Introduction of new foods** and **weaning from the bottle** are discussed for infants. Mothers join in making pleasing, nutritional finger foods and appropriate snacks for their toddlers. Mothers also discuss ways of preparing food for young children using foods prepared for older members of the family. Ways of **budgeting** and **stretching limited resources** are also discussed. It is stressed that meal time should be a pleasant experience as well as a nutritional one. Appetite change and finicky, problem eaters are discussed and mothers reassured, while also given suggestions for encouraging toddlers to eat. Growth as an indicator of health is also discussed and women are taught the significance of growth charts. Prevention of choking is also discussed.

RELATED LEARNING

This session dove-tails with Child Health and brings up discipline issues as well. Mothers sometime feel they must resort to discipling their children in order to get them to eat. These problems are explained in context of normal developmental milestones.

AUDIO-VISUAL AND PRINTED MATERIALS

MCH Growth Charts (20)

Haitian booklets (20)

Alimentando Al Bebe and Alimentando A Su Nino de 1-5 anos (20)

Baby food grinder and Training cup

Maternal and Child Health Migrant Project

LAY HEALTH ADVISOR PROGRAM

SESSION: Nutrition

TOPIC: Pregnancy and Lactation

CONTENT AND METHODS

Women are encouraged to continue **good eating practices** throughout pregnancy and lactation. Through discussion and games, women discuss how to plan **balanced meals** for themselves and their families. It is stressed that this is not a time for dieting. There is no set limit to weight gain. A weight gain chart is shared with the women and they learn the importance of calculating appropriate weight gain by mother's pre-pregnant weight and stature. Problems during pregnancy are discussed such as special cravings, pica and nausea and vomiting. **Preparation for breastfeeding** is discussed and importance of continued good nutritional intake during lactation. Women are introduced to the WIC program. Menus and innovative ways of preparing WIC foods are discussed.

RELATED LEARNING

This session dove-tails with Dental Health and Pregnancy & Childbirth and Social Services.

AUDIO-VISUAL AND PRINTED MATERIALS

Esperando la llegada de su bebe (20)

Prenatal weight gain chart (20)

Haitian booklets (20)

Maternal and Child Health Migrant Project

LAY HEALTH ADVISOR PROGRAM

SESSION: Social Services

TOPIC: Community Resources

CONTENT AND METHODS

Migrants often do not receive the social services to which they are entitled. Language barriers, lack of transportation and insufficient knowledge about specific services are often the reasons cited for not receiving help. In this session, women are provided with a list of **local social services** written in their language and with a map attached. Through discussion and case scenarios, women are encouraged to discuss types of services that they themselves have used in the past, and what problems they encountered in assessing these services. They also talk about services needed or utilized not listed on the resource guide. Through case scenarios, women are presented with hypothetical situations in which they are approached for information and/or advice. They discuss these scenarios in groups of 2 and then report back to the rest of the participants.

RELATED LEARNING

The process of discussing these issues will help women become more aware of services available to them and their families and gain more confidence in their ability to negotiate the system on behalf of themselves and others in their networks.

AUDIO-VISUAL AND PRINTED MATERIALS

"Know Your Rights" (31)

Maternal and Child Health Migrant Project

LAY HEALTH ADVISOR PROGRAM

SESSION: Social Services

TOPIC: Violence Toward Women

CONTENT AND METHODS

Domestic violence affects women of all ethnic and socio-economic groups. It is particularly difficult for migrant women who are battered to seek help because of language barriers, physical isolation due to their rural living situation and cross-cultural differences in defining battering. Women are encouraged to discuss their personal experiences of battering with other women, as a way to understand that battering is not an isolated event. Several points are stressed during the session: **1. no woman deserves to be hit for any reason. 2. battering is a social problem which affects thousands of women. 3. a battered woman is not alone. 4. there are resources and people available to help a battered woman.**

Through case scenarios and role plays, women learn how to listen to each other and offer support in an affirming, non-judgemental way.

RELATED LEARNING

Discussions of battering look specifically at two related issues. 1. the women's self-image and 2. their relationship with male figures. Women are encouraged to talk about their strengths and the contributions that they make to the family.

AUDIO-VISUAL AND PRINTED MATERIALS

"Mejor Sola que Mal Acompanada" (Better alone than with a bad companion) (11)

"Violence Against Woman: A Curriculum for Empowerment" (22)

Domestic Abuse Intervention Program Manual "Power and control: Tactics of men who batter: An educational curriculum" (24)

Maternal and Child Health Migrant Project

LAY HEALTH ADVISOR PROGRAM

SESSION: Social Services

TOPIC: Discipline/Abuse of Children

CONTENT AND METHODS

Discussion about **discipline** and **child abuse** begins by recognizing the strenghts of migrant women and acknowledging the tremendous stresses of being a parent which are compounded by the stresses inherent in parenting within the context of migrant life.

Women are asked to talk about **ways that children learn.** The use of discipline is suggested as one of these ways. Women are asked to talk about how they were disciplined as children. Further discussion focuses on methods of discipline which have been most effective. It is pointed out that when parents spank their children, it teaches the children that physical force is a way to handle frustration and control the behavior of others. **Alternative approaches to physical forces** are discussed, such as time out and removal of privileges. If a parent feels s/he must spank, it is stressed that nothing other than the hand should be used once on the child's hand or thigh. We recommend to the women that parents should avoid physical discipline when they are angry. Others methods of discipline are discussed including time out and removal of privleges.

RELATED LEARNING

Discussion of discipline rests on concepts of growth and development. Women discuss normal types of behavior and realistic expections for children of different ages. They discuss the possibility that a child's behavior may be a reflection of a larger issue. The training helps women recognize stresses in their child's life.

AUDIO-VISUAL AND PRINTED MATERIALS

Scriptographic booklets (28)

APPENDIX G
Resource List

MCH Migrant Project LHA Program Resource List

1. PROJECT HAPPIER
   Pennsylvania Dept. of Education
   333 Market St.
   Harrisburg, PA 17108

   A resource guide to English and Spanish health ed. materials.

2. AQUI SE HABLA ESPANOL
   DHHS Publication #(HSA)81-7006
   Public Health Service
   Health Services Administration
   Office of Communication and Public Affairs
   5600 Fishers Lane
   Rockville, MD 20857

   A guide to Spanish-Language health and patient information.

3. Child Safety Program
   North County Health Services
   348 Rancheros Dr.
   San Marcos, CA 92069

   A comprehensive program for teaching safety to parents in Spanish and English.

4. Work Smart .. Work Safely ... With Farm Chemicals
   NACA 1155 Fifteenth St. NW
   Washington, DC 20005

   A bilingual S/E guide to safe use of pesticides.

5. Parent Education Project
   Cottage 15
   Harbor/UCLA Medical Center
   1000 W. Carson Blvd.
   Torrance, CA 90509

   A bilingual S/E resource focusing on parenting and child health ... slides, cassettes, and printed material.

6. AMERICAN FRIENDS SERVICE COMMITTEE
   NY Metropolitan Region
   15 Rutherford Place
   New York, NY 10003
   212-598-0950

   Bilingual health education pamphlets in Haitian Creole/English. "Learning English and Improve Your Family's Health." 7 subjects available: MCH, STDs, and AIDS. $.45 ea.

7. Oak Orchard Community Health Center
   80 West Ave.
   Brockport, NY 14420
   Attn. Al Campagna, Director

   First Aid/Health promotion booklets SALUD/TO YOUR HEALTH! $2.00 ea. in Spanish or English.

8. Economic Opportunity Commission of Imperial County, Inc.
   Community Action Program
   654 Main St.
   El Centro, CA 92243

   Ocaso Sin Aurora a support booklet for parents who have experienced the death of a child.

9. Boston Woman's Health Book Collective 47 Nichols Ave. Watertown, MA 02172	Nuestros Cuerpos, Nuestras Vidas Spanish version of Our Bodies, Ourselves. $5.00 ea. or $2.50 per 24 copies.
10. Center for Population and Family Planning Columbia University 60 Haven Ave. New York, NY 10032	Bilingual Health Education materials. "Learning English and Improving your Family's Health" Set of 10 with teacher's manual $12.50. Span/Eng.
11. The Seal Press 312 S. Washington Seattle, WN 98104	Publisher of books on family violence including one that is bilingual S/E Mejor Sola Que Mal Acompanada $7.95
12. The Hesperian Foundation PO Box 1692 Palo Alto, CA 94302	Where There is no Doctor ... Where There is no Dentist ... Helping Health Workers Learn.
13. National Clearinghouse for Primary Care Information 8201 Greensboro Dr. Suite 600 McLean, VA 22102	Large inventory of primary care materials free to organizations delivering primary care. publications include: "Que Paso?" and "Kouman Nou Ye?" Spanish and Haitian Creole medical dictionaries; and "Health for the Nation's Harvesters."
14. National Migrant Resource Program 2512 South IH 35 Suite 220 Austin, TX 78704 1-800-531-5120	Networking organization for migrant health. Multi-lingual health education materials for different ethnic groups. "Orientation to Multi-cultural Health Care in Migrant Health Center Settings" by Robert Trotter. Video: "Provider Orientation". Migrant Clinician's Network Manual.

Video: "Health for America's Harvesters".

"Our Nations Migrant Farmworkers" Migrant Farmworker Training Kit developed by Gloria Mattera ... Probably will cost ± $150.00.

15. Creole Institute
Indiana University
Bloomington, Indiana

Comprehensive Creole/French/English dictionary and a book/cassette for creole language study.

16. National Coalition of Hispanic Mental Health and Human Services Organizations (COSSMHO)
1030 15th St. NW
Suite 1053
Washington, DC 20005
(202) 371-2100

Bibliography of "selected health materials in Spanish".
Manual: Delivering Preventive Care to Hispanics, 1988.

17. National Rural Health Association
301 East Armour Blvd.
Suite 420
Kansas City, MO 64111

"The Occupational Health of Migrant and Seasonal Farmworkers in the US" $15.00
"A Compendium of Health Resources for Agencies Serving Migrant and Seasonal Farmworkers in the US" FREE.

18. Northern Michigan Area Health Education Center (NMAHEC)
1000 Houghton
Saginaw, MI 48602

"Migrant Health Bibliography".

19. National Center for Education in Maternal and Child Health
38th and R St. NW
Washington, DC 20057

Various MCH materials Free:
"Bridging Ethno-Cultural Diversities in Social Work and Health" (Q52).

"Ethno-Cultural Factors in Social Work and Health: A Selected Bibliography" (Q51).

"Handbook for Social Work Practice in Community Health Settings" (Q50).

20. MCH MIGRANT PROJECT
Dept. of MCH
CB #7400, Rm. 407 Rosenau Hall
UNC Chapel Hill
Chapel Hill, NC 27599-7400

Pamphlets on selected MCH topics in Haitian Creole/English. (1 free copy)

Documentary Video Migrant Lay Health Advisors: A Strategy for Health Promotion. 18 min. VHS 1/2 in. (send blank tape)
Portable records: Prenatal weight gain chart and child growth charts (boy/girl).

21. Nutrition and Technical Services
Food and Nutrition Service
US Dept. of Agriculture
3101 Park Center Dr. Rm. 609
Alexandria, VA 22302

Publication for FREE: "Cross-Cultural Counseling ... A Guide for Nutrition and Health Counselors". Specific material about Asians, Hispanics, Native Americans and Black Americans.

22. Women's Educational Institute
853 Broadway Room 2014
New York, NY 10003
212-674-3322

Publisher of "Violence Against Women: A Curriculum for Empowerment".

23. Instituto Familiar de la Raza
Latino AIDS Project
2515 24th St. #2
San Francisco, CA 94110

Video 50 min. in Spanish on AIDS. $370.00. $75.00 for preview with $200.00 deposit.

24. Minnesota Program Development
206 W. 4th Street
Duluth, MN. 55806
617-267-7690

Domestic Abuse Intervention Program Manual. "Power and Control: Tactics of men who batter: An educational curriculum."

25. Su Clinica Familiar
1314 Ed Carey Dr.
Harlingen, TX 78550

Slide/tape programs(S/E) "A Healthy Smile"

26. Tri-County Community Health Center
PO Box 237
Newton Grove, NC 28366
919-567-6194

Pamphlet on poison prevention in Spanish, English and Haitian Creole.

27. Pesticide Farm Safety Staff
TS-757C
US EPA
401 M St. SW
Washington, DC 20460
202-557-7666

Slide/tape (S/E)
Farmworker Pesticide
Safety Program

28. Scriptographic Booklet
Channing L Bete Co. Inc.
South Deerfield, Ma. 01373

S/E booklets on violence
toward children

29. American Cancer Society
1-800-227-2345

Booklets on breast
self-exam and PAP
in Spanish.

30. Palm Beach County Health Dept.
Palm Beach, Florida

Video in Haitian Creole
on Family Planning. VHS
1/2 in. 15 min.

31. Farmworkers Legal Services of NC
PO Box 398
Newton Grove, NC 28366

Booklet describing legal
rights of farmworkers.
(work related issues ...
not immigration) "Know
Your Rights" in Spanish/
English/Haitian Creole.

32. Midwest Migrant Health Information
Office
National Migrant Worker Council, Inc.
6131 Outer Dr.
Detroit, Michigan 48235
(313) 927-7545

"Camp Health Aide Program"
has bilingual (S/E)
materials for conducting
peer counselor programs.

33. Spence Research, Inc.
5045 Franklin Avenue
P.O. Box 21207
Waco, TX 76702-1207
(817) 776-6461

Breast models and other
health education
materials.

34. Patient Vision
Milner-Fenwick, Inc.
2125 Greenspring Drive
Timonium, MD 21093
1-800-432-8433

Numerous S/E videos.

35. Alcohol and Drug Abuse
Information Clearinghouse
P.O. Box 2345
Rockville, MD 20852

S/E videos
(free)

36. Association for Voluntary Surgical
Contraception
122 East 42nd Street
New York, NY 10165

Family Planning
booklets (S/E)

37. March of Dimes Birth Defects Foundation Supply Division 1275 Mamaroneck Avenue White Plains, NY 10605	S/E Health Education Materials Developmental Time - Chart.
38. Krames Communication 312 90th Street Daly City, CA 94015-1898	S/E Health Education booklets.
39. Meade Johnson Nutritionals Bristol-Myers Company Evansville, IN 47721	General nutrition materials. (S/E) Infant Feeding Video (E) Breastfeeding Counseling Guidebook. (excellant)
40. Karols Videos 350 N. Pennsylvania Avenue Wilks Barre, PA 18773 1-800-524-1013	Baby Basics video. (S/E) $35.00
41. Johnson and Johnson Skillman, NJ 08558	El Crecimiento De Su Bebe Growth and Development chart. (Birth - 2 yrs.)
42. National Coalition Against Domestic Violence P.O. Box 15127 Washington, DC 20003-0127	S/E Brochures. 1-800-333-SAFE (Spanish speaking staff if requested)

APPENDIX H
Job Description

THE UNIVERSITY OF NORTH CAROLINA
AT
CHAPEL HILL

School of Public Health
Department of Maternal and Child Health

The University of North Carolina at Chapel Hill
CB# 7400, Rosenau Hall
Chapel Hill, N.C. 27599-7400

JOB DESCRIPTION

ECMHP Outreach Worker/ On-site Coordinator of LHA Program

Site: Tri-County Community Health Center

Date: May-October 1988

Duties:

1/2 time position in general Outreach as defined by TCCHC.

1/2 time position as on-site coordinator of the Maternal and Child Health Migrant Project's Lay Health Advisor Program.

The On-site Coordinator of the LHA Program would work collaboratively with the staff of the MCH Migrant Project on the following:

1. The selection and recruitment (based on MCH Project criteria) of farmworker women in the TCCHC area to be trained as LHAs.
2. Consultation with the LHAs recruited to determine best place and time for conducting classes and needs for transporation and childcare.
3. Recruitment of trainers and gathering of teaching materials.
4. If time and interest permit, involvement in actual data collection, such as conducting Pretests and Posttests with the LHAs.

Job Qualifications:

Bilingual (Spanish). Ability to work collaboratively with health care professionals as well as farmworker women.

Table 30

Hispanic Newborn and Infant Population: Well Child Visits by Age Band (Percentages)

1988 Infants

Age Band	Control				Intervention				Overall Total			
		Visits				Visits				Visits		
Mos.	n	0	1	2+	n	0	1	2+	n	0	1	2+
0-1	65	94	6	0	95	87	13	0	160	90	10	0
1-2	63	73	17	10	92	76	16	8	155	75	17	8
3-4	51	80	20	0	81	70	27	3	132	74	24	2
5-6	38	71	26	3	71	69	28	3	109	70	27	3
7-9	31	58	36	6	50	56	42	2	81	57	39	4
10-12*	9	56	44	0	21	33	62	5	30	40	57	3

1988 Newborns

Age Band	Control				Intervention				Overall Total			
		Visits				Visits				Visits		
Mos.	n	0	1	2+	n	0	1	2+	n	0	1	2+
0-1	21	33	57	10	42	48	52	0	63	43	54	3
1-2	16	56	44	0	34	21	65	15	50	32	58	10
3-4	14	79	21	0	25	72	28	0	39	74	26	0
5-6	12	75	17	8	20	70	30	0	32	72	25	3
7-9	10	70	30	0	20	55	35	10	30	60	33	7
10-12*	3	0	100	0	16	44	56	0	19	37	63	0

1989 Newborns

Age Band	Control				Intervention				Overall Total			
		Visits				Visits				Visits		
Mos.	n	0	1	2+	n	0	1	2+	n	0	1	2+
0-1	23	52	48	0	99	45	52	3	122	47	51	2
1-2	19	58	42	0	81	41	48	11	100	44	47	9
3-4	14	50	43	7	53	47	49	4	67	48	48	4
5-6	9	33	56	11	37	57	43	0	46	52	46	2
7-9	4	25	75	0	21	57	38	5	25	52	44	4
10-12*	0	–	–	–	6	33	67	0	6	33	67	0

n= the number of children in the cohort when they were each specific age band.

Visits counted as zero visits in age bands before known visit was made, so that (n) at 0-1 month age band equals total number of children.

* Up to 13 months of age. One month tolerance for visit at 1 year of age.

Table 31

Hispanic Newborn and Infant Population:
First Measured Hematocrit/Hemoglobin

Hematocrit/ Hemoglobin Test	1988 Control (n=20)	1988 Intervention (n=60)	1988 All[2] (n=80)	1989[1] Control (n=5)	1989[1] Intervention (n=19)	1989[1] All[3] (n=24)
Low[4]	45	67	61	100	47	42
Normal[5]	55	33	39	0	53	58
Total	100	100	100	100	100	100

[1]Rao score statistic, p= <.0093; tests difference in hematocrit/hemoglobin between the 4 (year x site) groups.
[2]Data missing or not applicable (child less than 6 months old) for 66 control and 76 intervention children.
[3]Data missing or not applicable for 18 control and 80 intervention children.
[4]Low = Hematocrit $\leq$ 34%; Hemoglobin $\leq$ 11%
[5]Normal = Hematocrit > 34%; Hemoglobin > 11%

APPENDIX C

Data Collection Forms

1. Prenatal Data Collection Form
2. Child Data Collection Form
3. Lay Health Advisor Profile
4. Pretest/Post of Knowledge and Attitudes
5. Exposure Questionnaire
6. Helping Contacts Questionnaire

Prenatal Data Collection Form

Family Number_____ **Family Member**_____

Name (last,first,middle)_____

Clinic Name_____

_____

Sociodemographic

1. Date of Birth ___/___/___

2. Ethnic group _____
   1. am. White
   2. am. Black
   3. hispanic
   4. haitian
   5. other (specify)_____
   6. unknown

3. Family status _____
   1. migrant
   2. seasonal
   3. other

4. Martial Status (at time of pregnancy) _____
   1. single/never married
   2. married
   3. separated/divorced/widow
   4. unknown

5. Occupation _____
   1. fieldwork
   2. packing house/factory
   3. clerical/sales
   4. childcare
   5. foodservice
   6. unemployed
   7. other (Specify)_____
   8. unknown

6. Education (years completed) _____

Reproductive History

7. Gravidity _____
8. Parity _____
9. Term _____

10. Preterm _____
11. Abortion _____
12. Living Children _____
13. Stillbirth _____
14. Low Birthweight _____
15. Multiple birth _____
16. Neonatal death _____
17. Postneonatal death _____
18. Child death _____

Current Pregnancy Profile

19. LMP___/___/____

20. EDC___/___/____

21. Date of first prenatal visit____/____/____

22. Number of weeks gestation when prenatal care began _____wks.

23. Place where prenatal care began _____
    1. in-state
    2. out-of-state

24. Certified for WIC _____
    1. yes
    2. no
    3. unknown

25. Date of WIC certification ____/____/____

26. Hematocrit (first) _____

27. Date of first hematocrit____/____/____

28. Hematocrit (second) _____

29. Date of second hematocrit____/____/____

30. Hematocrit (third) _____

31. Date of third hematocrit____/____/____

32. Social problems _____
    1. yes
    2. no
    3. unknown

33. If yes, then specify:
    a._____
    b._____
    c._____
    d._____
    e._____

		Yes	No	Unknown
34.	Hypertension	1	2	3
35.	Diabetes	1	2	3
36.	UTI	1	2	3
37.	TB	1	2	3
38.	STD	1	2	3

39. If yes to #38, then specify:_____

40. Prenatal pap exam date_____/_____/_____

41. Records carried _____
    1. yes
    2. no
    3. unknown

42. Postcards returned _____
    1. yes
    2. no

43. Total number of prenatal visits _____

Perinatal Outcome

44. Date of outcome_____/_____/_____

45. Type of outcome _____
    1. livebirth
    2. stillbirth
    3. therapeutic Ab
    4. spontaneous Ab
    5. ectopic pregnancy

46. Gender _____
    1. female
    2. male

47. Birthweight _____lbs.
    _____oz.

48. Gestational age _____wks.

49. Method of delivery _____
    1. normal spontaneous vag. delivery (NSVD)
    2. induced without forceps
    3. induced with forceps
    4. C-Section
    5. other (specify)_____
    6. unknown

50. Complications during L & D _____
    1. yes
    2. no
    3. unknown

51. If yes, then specify:_____

52. Congenital anomalies _____
    1. yes
    2. no
    3. unknown

53. If yes, then specify:_____

54. Postpartum visit _____
    1. yes
    2. no
    3. unknown

55. Choice of contraception _____
    1. IUD
    2. pill
    3. condom/foam
    4. sponge
    5. diaphragm/spermacide
    6. natural FP
    7. depo-provera
    8. vaginal supp.
    9. tubal ligation
    10. none
    11. other
    12. unknown

56. Postpartum pap exam date____/____/____

Child Data Collection Form

Family Number_____**Family Member**_____

Child's Name (last,first,middle)_____

Mother's Name (last,first,middle)_____

Date of Birth (mother) _____/_____/_____

Clinic Name_____

_____

Sociodemographic

1. Mother was a project participant _____
   1. yes
   2. no

2. Date of birth _____/_____/_____

3. Gender _____
   1.female
   2.male

4. Ethnic group _____
   1. am. White
   2. am. Black
   3. hispanic
   4. haitian
   8. other
   9. unknown

5. Family status _____
   1.migrant
   2.seasonal
   8.other

Pediatric History

6. Birthweight _____lbs.
   _____oz.

7. Gestational age (weeks) _____wks.

8. Congenital anomalies _____
   1. yes
   2. no
   9. unknown

9. If yes, then specify_____

Current Health Status

10. Type of first visit to center _____
    1. well child
    2. sick
    3. both

11. Date of visit _____/_____/_____

12. Hematocrit _____

13. Weight _____

14. Height _____

15. Developmental screen _____
    1. normal
    2. abnormal
    3. questionable
    8. other
    9. unknown

16. Immunization status _____
    1. adequate
    2. inadequate
    9. unknown

17. Records carried _____
    1. yes Type_____
    2. no
    9. unknown

***(Note: For each subsequent visit, document same series of responses as above).**

18. Type of second visit to center _____
19. Date of visit _____/_____/_____
20. Hematocrit _____
21. Weight _____
22. Height _____
23. Developmental screen _____
24. Immunization status _____
25. Records carried Type_____

26. Type of third visit to center
27. Date of visit _____/_____/_____
28. Hematocrit
29. Weight
30. Height
31. Developmental screen
32. Immunization status
33. Records carried Type_____

34. Type of fourth visit to center
35. Date of visit _____/_____/_____
36. Hematocrit
37. Weight
38. Height
39. Developmental screen
40. Immunization status
41. Records carried Type_____

42. Type of fifth visit to center
43. Date of visit _____/_____/_____
44. Hematocrit
45. Weight
46. Height
47. Developmental screen
48. Immunization status
49. Record carried Type_____

50. Total Number of Well Child Visits

51. WIC Certified
    1. yes
    2. no

52. Date of WIC certification Date _____/_____/_____

53. Enrolled in Headstart
    1. yes
    2. no
    9. unknown

54. Illness(es) New Episodes Date

1._____|_____
2._____|_____
3._____|_____
4._____|_____
5._____|_____

55. Injuries New Episodes Date

1. _____|_____
2. _____|_____
3. _____|_____

56. Total number of hospital admissions _____

57. Total number of emergency visits _____

58. Date of 1st hospital/emergency visit _____/_____/_____

59. Diagnosis _____

60. Length of stay (days) _____

61. Diagnosis related to illness/injury reported in #54/#55. _____
    1. yes
    2. no

62. Date of 2nd hospital/emergency visit _____/_____/_____

63. Diagnosis _____
64. Length of stay _____
65. Diagnosis related to illness/injury reported in #54/#55. _____

66. Date of 3rd hospital/emergency visit _____/_____/_____

67. Diagnosis _____
68. Length of stay _____
65. Diagnosis related to illness/injury reported in #54/#55. _____

70. Date of 4th hospital/emergency visit _____/_____/_____

71. Diagnosis _____
72. Length of stay _____
73. Diagnosis related to illness/injury reported in #54/#55. _____

74. Infant death _____
    1. yes
    2. no
    9. unknown

75. Date of death _____/_____/_____

76. Cause of death _____

Lay Health Advisor Profile

Name_____ Date of Birth_____
Interviewer ID#_____Respondent ID#_____ Interview Date_____

1. Country of Origin_____
2. Length of time in U.S._____
3. Languages spoken (Preferred language first)_____
4. Years of education_____Where_____
5. Marital status_____
6. Have you had other training, like first aid or adult education? Yes No

   Type training:_____
7. What kind of work (outside the home) do you do?

   _____
8. How long have you done this work?_____
9. What other kinds of work have you done?

   _____
10. What kind of work does (did) your husband do?

    _____
11. Do you have children?_____Ages_____
12. Are you raising anyone else's children? Yes No
13. Do the children travel with you? Yes No

    If not, where do they stay?_____
14. Do you stay with this crew all the time (in FL or TX)?_____
15. What community groups or organizations have you belonged to?

    _____
16. Do you have a special job in any of these organizations? Yes No

    Explain:_____

17. Have there been any projects or activities in the community that you have been particularly interested in? Yes No

Explain:_____

Helping Activity

As you know, the Lay Health Advisor program is for women who are interested in learning more about the health of themselves and their children and who can share what they have learned with their friends and families. The reason we came to you is because your name was mentioned as someone who would be interested in becoming a Lay Health Advisor.

18. About how often do you get asked for advice or help in a week?_____

19. By how many people?_____

20. Where does the advising take place (laundromat, church, home, store, movies, work, dance, clinic)?

_____

21. What kinds of people ask you for advice or help (old, young, friends, family, people on the crew)?

_____

22. What do they ask you about (health of themselves or their children, family problems, health or social services, for money, childcare, transportation, interpreting)?

_____

23. In general, what kind of help do you give people (advice, information about health, send them to someone else, give them money, transportation, interpret for them)?

_____

24. Have there been times you feel you can't be of much help? Yes No

Explain:_____

25. Do you ever ask someone else in particular for help for yourself? Yes No

Explain:_____

26. What do you usually ask them?_____

_____

27. Why do you think people turn to you for advice or help?

_____

_____

Resource ID#: 2341

Migrant Lay Health Advisors: A Strategy for Health Promotion Final Report