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ABSTRACT

Objectives and outcome data of a University of Cincinnati College of Medicine program, which serves infants at risk for developmental disorders and their mothers, are presented. The Infant Stimulation/Mother Training Program for premature, low birthweight infants is designed to meet the following service objectives: 1) identify and recruit high-risk mother-infant pairs after delivery; 2) modify the environment of the neonatal special care nursery to actively involve parents in infant care; 3) counsel, support, and provide medical information to parents; 4) provide services following the infant's discharge, including weekly mother-infant classes and home visiting; 5) provide medical followup clinic services integrated with social service, nutrition, and psychological interventions, as well as referrals to specialty clinics and educational intervention programs; 6) provide continuity of service from birth to 3 years; 7) provide training and practicum experiences for medical, nursing, and graduate students; 8) gain public support for the concept of primary prevention; and 9) develop curriculum materials, media presentations, and publications. Program accomplishments are detailed, including the names of out-of-town participating hospitals; data on inservice training and consultation; and program evaluation findings on the impact of the nurses' outreach training. (SEW)

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Infant Stimulation/Mother Training Program

Outreach Training Summary

(7/1/81-6/30/82)

OVERVIEW OF PROJECT

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This HCEEP Outreach Project, having completed its second year of funding, has focused on broadening the traditional biomedical approach to treatment. Various described as a biopsychosocial, developmental or ecological health model and translated in a large medical center, the focus on the child has been complemented with a major focus on family functioning. That developmental problems are the result of a combination of factors rather than any one factor operating alone has been widely documented. And, since the health care delivery system has extensive contact with parents and children during the perinatal and postnatal periods, we have utilized natural opportunities to improve the functioning of both parent and child as they are served within this system.

The IS/MT Project is based in the Newborn Division of the Department of Pediatrics in the University of Cincinnati College of Medicine. It serves a population of premature, low birthweight infants and their socially high-risk mothers delivered at the adjacent Cincinnati General Hospital (CGH). Beginning at birth, infants who are at risk for developmental disabilities are identified in both the full-term and special care nurseries. The treatment foci is both infant- and parent-specific and includes an intermix of pediatric and educational interventions during infant's first year of life.

The major goal of the IS/MT Project has been to coordinate the efforts of medical, nursing, education and social service personnel in developing a service model that will prevent or limit the extent of developmental disabilities among a population of medically and socially at-risk infants. This has been accomplished through the implementation of the following service objectives:

- 1) Identification and recruitment of high-risk mother-infant pairs at Cincinnati General Hospital (CGH) during the lying-in period following delivery.

- Approximately 125 mother-infant pairs a year, screened for eligibility by nursing and neonatology staff in the special care nursery and by social service and project staff in the full-term nursery, are involved in the weekly parent-infant classes during infant's first year of life. Mothers (and sometimes fathers, too) are recruited and involved during the lying-in period following delivery.
- 2) Modification of the environment of the neonatal special care nursery so that the premature, sickly infant is guaranteed not only a right to live based on sophisticated life-sustaining technology but also the right to life - defining mother care.

- Pre-service and in-service training of special care nursing and medical resident and intern staff has resulted in a nursing protocol for infant stimulation technique and a program to actively involve parents in the physical and emotional care of their infant. IEPs, including interesting toys, music boxes, visually attractive targets, and vestibular, auditory and tactile stimulation engage nurses as effective teacher models for parents as they visit their infants in the nursery.

- 3) Development and implementation of a program to provide counsel, support and medical information to parents during infants' hospitalization in neonatal special care nursery.

- Weekly Parent Support Group meetings have provided a setting where parents can express fears, frustrations and concerns about their sick infants, share with one another, and receive answers to questions about their infants' medical condition. The IS/MT project nurse assists special care nursery staff in conducting these meetings. Parent-infant bonding is facilitated through shared visits to the nursery which encourages the parents' physical and emotional contact with their infants.

- 4) Development and implementation of a service program following infant's discharge from the hospital nursery which includes weekly mother-infant classes and supplementary home visiting as needed.

- A special educator, nurse, physician's assistant and para-professional teacher share responsibility for conducting weekly postnatal mother-infant classes. Approximately 50 mother-infant pairs are so involved at any given time. IEPs for mothers and infants, ongoing support and assistance to families in establishing and maintaining necessary medical and ancillary agency linkages, i.e., WIC and Welfare Department, and transportation and supplementary home visiting as needed characterize the service program offered during infants' first year of life.

- 5) Development and implementation of a medical follow-up clinic for special care infants and their families, integrating medical, social service, nutrition, and psychological interventions with referrals to follow-up specialty clinics and educational intervention programs as indicated.

- Departmental neonatologists, physician's assistant, and perinatal social worker, nutritionist and psychologist conduct weekly follow-up clinics. Medical, neurological, psychological, and nutritional assessments are completed on high-risk infants and social service evaluation of the family links parents with educational programs within the United Services for Effective Parenting (USEP) network.

A broader goal in initiating a First Chance Project for high-risk infants within a newborn pediatric facility has been to demonstrate the importance of involving pediatric specialists in the process and outcome of educational interventions. This has been accomplished through the implementation of the following training and dissemination objectives:

- 6) Development of a coordinated early intervention effort which features continuity of service from birth to three years through a project-based central referral system linked to community early childhood programs.

- USEP is a statewide coalition of over 300 birth-to-three educational programs. Both the local chapter and USEP-OHIO are coordinated through the Newborn Division of the College of Medicine as part of our project's translation of interagency cooperation, training and dissemination. The local USEP chapter has a well-defined central referral system housed in our project and features monthly meetings of program deliverers from 42 agencies, joint purchase of toys and loan of educational materials, and collaborative in-service training across programs. Our project infants and families are linked effectively to other USEP programs as their needs for specialized, follow-up educational intervention are indicated.

- 7) Training and practicum experiences for medical, nursing, and graduate students at the University of Cincinnati.

- Fifty-six students have earned credit and/or fulfilled a requirement for supervised experience in an infant intervention program through our project. We have been careful not to intrude on the privacy of our clients. Medical and nursing students have accompanied parents on clinic visits, serving as parent-child advocates; child development and special education students have been paired with staff members in the delivery of mother-infant classes; and nurses have participated in Parent Support Group meetings.

- 8) Development of public awareness and service commitment to the concept of primary prevention through sharing of program technology in short courses, site visits, workshops, conferences and consultation.

- Total of 381 persons from 31 states and Canada participated in one of our four-day short courses, "Infant Enrichment Through Mother Training," offered in the Spring and Fall of each year.

- Total of 62 site visits by agency personnel from within and outside of Ohio.

- Total of 96 presentations - workshops or conferences - in New York, Nebraska, W. Virginia, Delaware, Louisiana, Pennsylvania, Tennessee, Missouri, Virginia, Texas, Kentucky, Wisconsin, Michigan, Indiana, Vermont, Ohio, Israel, Maine, Montreal and Regina (Canada).

- Private consultation in the area of program development to over 125 different agencies.

- 9) Development of curriculum materials, media presentations, and publications required for training and dissemination foci of project mode.

- We have responded to 1691 written requests for curriculum materials; 47 requests for audiovisual productions; and 3012 requests for publications.

Formative and summative evaluations on the impact of the services provided to high-risk infants and their families by the IS/MT Project supports an ecological health model. An intermix of pediatric and educational interventions, beginning in hospital nurseries and continuing during infant's first year of life, serves to strengthen a psychosocial approach to treatment in medical settings. The addition of training and new behavioral interventions in CGH's neonatal special care nursery and the follow-up medical, educational and social services all seem to positively influence infant outcome at one year of age. Publications entitled "Sample Descriptions and Predictions of Early Intervention Involvement in a Medically and Socially 'At Risk' Population of Mothers and Infants" and "Nurse-Infant Interaction During Feeding-Before and After Training" provide data on the effectiveness of the ecological health model.

Based on the successful effects of the training and involvement of CGH neonatal special care unit's nursing staff, nursing protocol was re-written to include infant stimulation and parent education. This curriculum development by nurses suggested a logical target for outreach training - nursing staff from other hospital nurseries. Capturing the interest and involvement of obstetrical and pediatric nurses would serve to define a new service component and health care linkage in early educational intervention with high-risk populations of infants and their families. Providing this training would also be an effective response to a statement on Parent and Newborn Interaction adopted by the House of Delegates of the American Medical Association on December 6, 1977: "It is timely to review all hospital procedures and professional practices for their appropriateness and thereby encourage the hospitals to assess their policy in support of the bonding principle."

After completing the second year of outreach funding, we are certain that we have hit a responsive chord in addressing the training needs of hospital-based maternity and infant care nurses. We initially identified six hospitals in the Greater Cincinnati area for program replication. However, nursing leaders from all 9 hospitals in the metropolitan area have not only attended our short courses but have continued to seek on-site consultation and training related to program development. Moreover, a nursing consortium, with nursing representatives from all 9 hospitals meets on a monthly basis to cooperate in the development of hospital-based nurses, which has been complemented by College of Nursing faculty and public health nurses. Moreover, professional staff from 53 hospitals -- a total of 286 persons -- have attended one of our three-day short courses offered six times during Year 1 and Year 2 of our Outreach Training Grant.

OUTREACH ACCOMPLISHMENTS

Outreach Approach

The IS/MT Project's base of operations in the Newborn Division of a large medical center provides 1) linkages with both CGH and Children's Hospitals special care nurseries, 2) well-defined comprehensive follow-up services for high-risk infants during their first year of life, and 3) a referral system to 42 educational intervention programs.

Hospital-based maternity and infant care nursing staff will continue to be the main target of our training efforts. The nine local hospitals included in last year's outreach training delivered a total of 23,913 infants last year. If we take the federal child count figures in determining the number of school-aged children who were served in special education programs for the 1977-78 school year, 7.3% were so served. Applying the formula to hospitals served and their total deliveries, we can say that 1745 especially high-risk infants and their parents were positively affected by the outreach training provided to hospital-based maternity and infant care nursing personnel this year. In the case of especially vulnerable infants with established risk such as Down's Syndrome infants, and those at biological risk who present a history of prenatal, perinatal, or neonatal insults such as premature infants, increased sensitivity and knowledge by nurses in hospital postpartum units results in earlier identification and treatment. Towards this end, the involvement of hospital nursing staff in USEP's network of 42 community-based education programs for the birth-to-three population provides the linkage that was missing in the past.

The replication of Cincinnati General Hospital's (CGH) special care nursery model involves a teaching-learning process which has been fairly well defined during our first year of outreach training. In outline form, the steps and materials are identified as follows:

A. Identification of training needs and screening of applicants.

1. A brochure describing the training program identifies target hospitals through one of the following methods -
 - a. Brochure mailed to all hospitals in the State of Ohio
 - b. Brochure mailed in response to telephone requests for information
 - c. Brochure distributed geographically by USEP-OHIO Council members.
2. Inclusion in nurses' outreach training program requires initial attendance and participation in one of the six short courses conducted at the College of Medicine.
3. Of the 153 hospitals in Ohio which include maternity, nursery and infant care services, 28 hospitals or 18 percent sent nursing representatives to one of our six 3-day short courses. Other disciplines represented included 14 physical/occupational therapists, 9 faculty members from schools of nursing, 3 childbirth education teachers, a psychologist, 5 public health nurses, 5 graduate nursing students and three social workers. The breakdown of

course participants from out-of-town/state is included in the following table.

Out-of-Town Outreach Training Participants

Name of Hospital	Deliveries	Short Course Participants
Defiance Hospital Defiance, OH	695	3 RNs
Madison County Hospital London, OH	378	1 RN
University Hospital of Cleveland Cleveland, OH	2354	1 RN
Vanderbilt Hospital Nashville, TN	1600	1 RN
Massillon Community Hospital Massillon, OH	450	1 RN
Wadsworth Rittman Hospital Wadsworth, OH	229	2 RNs
Community Hospital of Springfield & Clark County Springfield, OH	2400	2 RNs
Miami Valley Hospital Dayton, OH	3000	2 RNs
Riverside Methodist Hospital Columbus, OH	4000	3 RNs
Maple Avenue Hospital DuBois, PA	500	1 RN 1 Social Worker
University of Kentucky Hospital Lexington, KY	2300 high risk referral center	7 RNs
Ohio State University Hospital Columbus, OH	2684	2 Physical Thera.
Children's Hospital Columbus, OH	519 high risk referral center	3 Occupa. Thera.
Mt. Carmel Medical Center Columbus, OH	3000	2 RNs

Parma Community General Hospital Parma, OH	1947	1 RN
St. Vincent Medical Center Toledo, OH	1543	3 RNs
Northside Hospital Atlanta, GA	5362	1 Physical Thera. 1 Occupa. Thera.
James Whitcomb Riley Hospital Indianapolis, IN	700 high risk referral agency	9 RNs
Children's Hospital Boxborough, MA	600 high risk referral agency	2 RNs
Children's Medical Center Dayton, OH	400 high risk referral agency	1 Psychologist 1 Physical Thera.
Aultman Hospital Canton, OH	3037	1 RN
Blodgett Memorial Medical Ctr. Grand Rapids, MI	2500	6 RNs 1 Physical Thera.
Community Hospital Battle Creek, MI	1300	4 RNs
Erie County Crippled Children's Society Erie, PA	N/A	1 Social Worker 1 Proj. Dir.
Kosair Crippled Children's Hospital Louisville, KY	Sp.care nursery 50 daily census 35 full term nursery daily census	6 RNs
Lutheran Hospital Ft. Wayne, IN	2000	1 Occupa. Thera. 1 Physical Thera.
Mercy Hospital Hamilton, OH	N/A	1 Speech Thera. 2 RNs

North Canton Med. Ctr. North Canton, OH	N/A	1 RN
Parkview Memorial Hosp. Ft. Wayne, IN	3250	1 Occupa. Thera.
St. Luke Hospital Ft. Thomas, KY	1471	1 RN
Pathfinders Services, Inc. Huntington, IN	N/A	2 RNs
Providence Hospital Southfield, MI	3900	2 RNs
DePaul Hospital Norfolk, VA	3137	1 RN
Kettering Medical Center Kettering, OH	N/A	2 RNs
Downeast Health Services Ellsworth, ME	200	2 RNs
Southwestern Mich. Rehab. Hosp. Battle Creek, MI	N/A	1 Occupa. Thera. 2 RNs
Maine Medical Center Portland, ME	2500	3 RNs
Reynolds Memorial Hospital Glen Dale, WV	300	2 RNs
Ky. Chapter for Prevention of Child Abuse Louisville, KY	N/A	1 Exec. Dir.

B. Implementation of behavioral objectives for nurse participants through content of short course.

1. Course #1 - October 13-16, 1980

- Attended by 28 hospital-based nurses from 9 Greater Cincinnati Area hospitals
- Attended by 1 perinatal psychologist and 1 physical therapist from the Children's Medical Center, Dayton, OH

2. Course #2 - January 23-26, 1981

- Attended by 45 hospital-based nurses, 1 occupational therapist

- 8 hospitals that had been represented at the first short course sent new nurse trainees
- 6 new hospitals sent full-time participants. These hospitals were 1) Defiance Hospital, Defiance, OH (695 deliveries), 2) Madison County Hospital, London, OH (378 deliveries), 3) University Hospital of Cleveland, Cleveland, OH (2354 deliveries), 4) Vanderbilt University Hospital, Nashville, TN (1600 deliveries), 5) Massillon Community Hospital, Massillon, OH (450 deliveries), 6) Wadsworth-Rittman Hospital, Wadsworth, OH (229 deliveries)

3. Course #3 - April 6-8, 1981

- Attended by 44 hospital-based nurses, 1 social worker, 2 physical therapists, and 3 occupational therapists
- 6 repeat hospitals
- 10 new hospitals - 1) Community Hospital of Springfield and Clark County, Springfield, OH (2400 deliveries), 2) Miami Valley Hospital, Dayton, OH (3000 deliveries), 3) Riverside Methodist Hospital, Columbus, OH (4000 deliveries), 4) Maple Avenue Hospital, DuBois, PA (500 deliveries), 5) University of Kentucky Hospital, Lexington, KY (2300 deliveries - high risk referral center), 6) Ohio State University Hospital, Columbus, OH (2684 deliveries), 7) Children's Hospital, Columbus, OH (1519 deliveries - high risk referral agency), 8) Mt. Carmel Medical Center, Columbus, OH (3000 deliveries), 9) Parma Community General Hospital, Parma, OH (1947 deliveries), 10) St. Vincent Medical Center, Toledo, OH (1543 deliveries)
- 4 public health nurses from Greater Cincinnati Area
- 1 faculty member from Christ Hospital
- 2 faculty members from U. C. College of Nursing and Health
- 1 graduate student from U. C. College of Nursing and Health

4. Course #4 - June 22-24, 1981

- Attended by 34 hospital-based nurses, 1 occupational therapist, 2 physical therapists, 1 childbirth educator
- 9 repeat hospitals
- 3 new hospitals - 1) Northside Hospital, Atlanta, GA (5362 deliveries), 2) James Whitcomb Riley Hospital, Indianapolis, IN (700 deliveries - high risk referral agency), 3) Children's Hospital, Boxborough, MA (600 deliveries - high risk referral agency)
- 1 faculty member from Christ Hospital
- 4 graduate students from U. C. College of Nursing and Health

5. Course #5 - January 19-21, 1982

- Attended by 55 hospital-based nurses, 3 physical therapists, 2 occupational therapists, 1 family care coordinator, 1 social worker, 1 project director, 1 speech pathologist
- 8 repeat hospitals
- 7 new hospitals - 1) Aultman Hospital, Canton, OH (3037 deliveries)

ies), 2) Blodgett Memorial Medical Center, Grand Rapids, MI (2500 deliveries), 3) Community Hospital, Battle Creek, MI (1300 deliveries), 4) Kosair Crippled Children's Hospital, Louisville, KY (Special care nursery daily census, 50; 35 fullterm nursery daily census), 5) Lutheran Hospital, Ft. Wayne, IN (2000 deliveries), 6) Parkview Memorial Hospital, Ft. Wayne, IN (3250 deliveries), 7) St. Luke Hospital, Ft. Thomas, KY (1471 deliveries)

6. Course #6 - May 4-6, 1982

- Attended by 29 hospital-based nurses, 1 occupational therapist, 1 childbirth educator, 3 infant stimulation instructors, 1 director from child abuse agency
- 7 repeat hospitals
- 7 new hospitals - 1) Providence Hospital, Southfield, MI (3900 deliveries), 2) DePaul Hospital Clinic, Norfolk, VA (3137 deliveries), 3) Kettering Medical Center, Kettering, OH (N/A), 4) Downeast Health Services, Ellsworth, ME (200 deliveries), 5) Southwestern Michigan Rehabilitation Hospital, Battle Creek, MI (N/A), 6) Maine Medical Center, Portland, ME (2500 deliveries), 7) Reynolds Memorial Hospital, Glen Dale, WV (300 deliveries)

C. Replication of nurses' training model through continued consultation and training.

1. Within the network of obstetrical and postpartum nursing staff who were specifically identified for intensive training and during Year 1 of Outreach--Bethesda, Good Samaritan, Christ, Cincinnati General, St. Elizabeth, Jewish, Our Lady of Mercy, Ft. Hamilton and Children's --the outreach training staff presented 20 inservices in addition to their staff's attendance at one of the six scheduled short courses. These inservices were attended by a total of 270 nursery and maternity personnel. In addition, 13 other inservices were presented by nursing staff that had attended one of the short courses to a total of 162 other hospital personnel.
2. In addition to the six scheduled short courses and inservices conducted for local hospitals targeted during Years 1 & 2, the project director, coordinator, and CGH special care nurses were involved in the following presentations or workshops:
 - August 4-6, 1980, Earladeen Badger
Two presentations at 30th Annual Obstetric-Pediatric Seminar in Nashville, TN, 1) "Infant Stimulation/Mother Training Project" and 2) "Biological Risk of the Infant and the Social Risk of the Mothers as They Interact to Influence Attachment"
 - September 3-5, 1980 - Earladeen Badger
Presented "Promoting Infant Development: A Coalition Model for Community Service Delivery" at the American Psychological Association Annual Convention in Montreal, Canada

- October 3, 1980 - Earladeen Badger
"Cognitive Development from birth to Three" - Mini USEP & SEERC sponsored conference in Findlay, OH
- October 7, 1980 - Earladeen badger
"Update on USEP" - Child Health Association, Cincinnati, OH
- October 10-11, 1980 - Earladeen Badger
"The Competent Child" - 2 day workshop in Regina, Saskatchewan, Canada
- November 7, 1980 - Earladeen Badger
"Maternal-Infant Interaction" - USEP meeting, Cincinnati, OH
- November 14, 1980 - Earladeen Badger
"Infant and Early Stimulation" - 12th Annual MR/PAR (Professional Association for Retardation) Conference, Columbus, OH
- November 18-19, 1980 - Earladeen Badger
"Joint Treatment of Parents and Preschool Children in Early Intervention Programs" - 32nd annual convention of AAPSC
- January 20, 1981 - Nancy Elder and Barbara Renner
Project awareness training - USEP meeting, Dayton, OH
- March 17, 1981 - Nancy Elder and Pat Stitzel
Infant stimulation booth at Good Samaritan Hospital Health Fair, Cincinnati, OH
- March, 1981 - Earladeen Badger
4 weekly classes with area nurses on "Psychological Development During Infancy" - Cincinnati, OH
- March 16-18, 1981 - Earladeen Badger and Sue Derco participated in and attended TADS Topical Workshop: Health Care/Education Relationships in New Orleans, LA. Papers presented: "A Grassroots Approach to Institutional Change" and "A Nursing Care Plan for Infant Stimulation and Parent Education/Support in a Newborn Special Care Unit."
- March 20, 1981 - Nancy Elder and Barbara Renner
Project awareness training - USEP meeting, Springfield, OH
- April 22, 1981 - Barbara Renner, Pat Stitzel, Yvonne Hissong presented "The View From Inside My Isolette" - Reclamation of Professional Practice Workshop - Cincinnati, OH
- May 8-9, 1981 - Earladeen Badger
"Promoting the Mental Health of the Family Through Parenting Programs" - OAEYC Conference, Cincinnati, OH
- May 12-13, 1981 - Earladeen Badger
"Infant Stimulation" - Ohio State's Dept. of Family Relations and Human Development Conference on "Infant Development: Birth to Eighteen Months."
- June 8, 1981 - Nancy Elder, Barbara Renner, and Sue Derco
"Treatment Program to Facilitate Family Coping and Infant Growth and Development" - Vulnerable Infant Workshop - Cincinnati, OH
- June 9, 1981 - Earladeen Badger
"Match-Mismatch Between Parent and Child" - University of South Carolina, Department of Prenatal Medicine and Community Health - Medical School.
- June 15-17, 1981 - Earladeen Badger, Nancy Elder, and Barbara Renner - 2 day workshop for nurses - University of Nebraska,

- Omaha, NE
- September 3, 1981 - Earladeen Badger, Terri Danielle
4 project awareness inservices at James Whitcomb Riley
Hospital, Indianapolis, IN
 - September 18, 1981 - Earladeen Badger, Nancy Elder, Barbara Renner
Presentations at "The Infant's World" Conference - Cleveland Metro
General Hospital, Cleveland, OH
 - March 27, 1982 - Nancy Elder and Tari Gratton - Infant/Toddler Learning
presentation for Cleveland Association for the Education of Young
Children; Psychology Dept. at Case Western Reserve University,
Cleveland, OH
 - March 30, 1982 - Nancy Elder and Tari Gratton - Workshop
entitled "Developmental Intervention with High-Risk Infants"
at MAIMH Conference - "Infancy: A Family Affair", Ann Arbor, MI
 - April 14, 1982 - Earladeen Badger - "Match-Mismatch" at Mc-
Cullough-Hyde Hospital, Oxford, OH.
3. To promote cooperation and sharing among the nine local hospitals
who have elected to replicate all or part of our nurses' training
model during Year 1, a nursing consortium met with project staff
on a monthly basis. At these meetings, nurses were able to sup-
port one another, share successes, and problem-solve in troubled
areas. The review of new pamphlets and educational materials
provides a continuing incentive for each hospital to maximize and
update their care plan for infants and parents.
4. The following table graphically presents descriptive data and
results of our training efforts with nursing staff from the nine
Greater Cincinnati Area hospitals. It is noted that all hospitals
are continuously involved in outreach training through 1) sending
additional nurses to subsequent offerings of 3-day short course,
2) conducting follow-up services for infants and parents, 3) parti-
cipating in monthly nurses' consortium meetings, and 4) carrying
out and sharing where they are in program development. The in-
formation provided is current in that the outreach coordinator
personally visited all hospitals within the last three months.

FIRST YEAR OUTREACH TRAINING (1980-81)

Name of Hospital	Deliveries (1980)	Short Course (S.C.) Participants	Number of Inservices	Nurses Consortium Meetings	Program Development
Jewish 3200 Burnet Ave. Cincinnati, OH 872-3477	1643	7 RNs	a. 3 by S.C. participants 28 nurses	4	a. Infant care classes include showing parents tracking and reflexive behaviors; infant capabilities b. Parents no longer wear masks with infants c. OB has become one area instead of 3 d. Using Mother's Questionnaire e. Have a parents library f. Parents bring in toys for isolettes g. Each crib has a colorful eye level target stimuli h. Gift shop is selling books recommended by S.C.
Bethesda 619 Oak St. Cincinnati, OH 559-6194	4330	14 RNs	a. 3 by project 47 nurses b. 1 by S.C. participants 20 nurses	2	a. Will implement primary nursing and infant stimulation together b. Preparing to do videotape of infant stimulation for parent teaching c. Encouraging parents to bring toys for isolettes and clothing for infants
Christ 2139 Auburn Cincinnati, OH 369-2321	3400	7 RNs 2 faculty	a. 1 by project 26 nurses b. 1 by S.C. participants 20 nurses	3	a. Made booklets for isolettes b. Using target stimuli on isolettes c. 1 nurse trained to set up parenting classes d. Infant stimulation has been included into infant care demonstrations e. Infant stimulation bulletin board is hanging in hallway showing pictures of appropriate toys f. Had infant stimulation booth at patient care fair - attended by 1800 people g. Student nurses do infant stimulation teaching to parents in hospital and Drs. offices h. Made infant stimulation slide/tape program for staff education i. Referrals to USEP j. One on one parent classes

FIRST YEAR OUTREACH TRAINING (1980-81)

Name of Hospital	Deliveries (1980)	Short Course (S.C.) Participants	Number of Inservices	Nurses Consortium Meetings	Program Development
Good Samaritan 3217 Clifton Avenue Cincinnati, OH 872-2471	5233	14 RNs 1 OT/PT	a. 1 by project 27 nurses	7	<ul style="list-style-type: none"> a. Using target stimuli on isolettes b. Using mobiles in nursery c. Using Mother's Questionnaire d. Teaching infant stimulation techniques and infant capabilities with infant care demonstrations e. Giving parents pamphlets recommended by project f. Have included project leader on a task force committee for alternative to abortion g. Had infant stimulation booth at Health Fair
Children's 240 Bethesda Avenue Cincinnati, OH 559-4595	1-South - Neonatology (No deliveries) Admissions 2700	12 RNs	<ul style="list-style-type: none"> a. 4 by S.C. participants 74 nurses b. 1 by project 25 nurses 	5	<ul style="list-style-type: none"> a. Dressed infants in Halloween costumes b. Using target stimuli and mobiles on isolettes and cribs c. Have made parenting cards explaining what toys parents can bring d. Using infant stimulation techniques on care plans e. Have set up parent library in parent lounge f. Have recommended books for gift shop g. One on one teaching of infant stimulation with new staff members h. Set up library on infant stimulation for staff i. Using infant carriers j. Parent support groups to begin in September, 1981
	2-South - (Acute and Chronic Care Infant Unit)	5 RNs		9	<ul style="list-style-type: none"> a. Set up infant stimulation committee b. 4 nurses trained to set up parenting classes c. Have written guidelines for infant stimulation d. Have 2 weekly parent meetings-includes routine growth and development; routine

FIRST YEAR OUTREACH TRAINING (1980-81)

Name of Hospital	Deliveries (1980)	Short Course (S.C.) Participants	Number of Inservices	Nurses Consortium Meetings	Program Development
					<p>infant care; feeding and nutrition; sensorimotor development of infants and appropriate toys; and health care and safety. Average attendance - 8</p> <p>e. Nurses have made mobiles for cribs</p> <p>f. Using age appropriate toys for all children</p> <p>g. Nurse leader presented 2-South's infant stimulation program at "Infant Enrich- ment Through Parent Training" course on 8/18/81</p> <p>h. Referring families to USEP</p>
Fort Hamilton-Hughes 701 Haldimand Hamilton, OH 867-2221	2000	15 RNs 1 PT	<p>a. 1 by project 12 nurses</p> <p>b. 4 by S.C. participants 20 nurses</p>	7	<p>a. Set up infant stimulation committee</p> <p>b. Using toys to stimulate premature infants</p> <p>c. Recording mother's voice for premature in- fants</p> <p>d. Prepared booklet for parents</p> <p>e. One on one teaching with parents</p> <p>f. One nurse trained to set up parenting classes</p> <p>g. Parents bringing stuffed animals for their newborns</p> <p>h. Childbirth Classes including infant stimulation</p> <p>i. Bulletin board on postpartum showing infant stimulation techniques</p>
Cincinnati General (fullterm nursery) 234 Goodman St. Cincinnati, OH 872-4226	3000	32 RNs	<p>a. 5 by project 52 nurses</p> <p>b. One on one by S.C. participants</p>	5	<p>a. Using target stimuli on isolettes</p> <p>b. Infant stimulation included in infant care classes</p> <p>c. Mobiles & decals used in nurseries</p> <p>d. Posters explaining infant stimulation and infant care hanging in halls</p> <p>e. Nurses presenting portion of project short course</p> <p>f. Working on slide series to use for parent teaching</p>

FIRST YEAR OUTREACH TRAINING (1980-81)

Name of Hospital	Deliveries (1980)	Short Course (S.C.) Participants	Number of Inservices	Nurses Consortium Meetings	Program Development
Our Lady of Mercy Rowan Hills Drive Cincinnati, OH 527-5581	1476	7 RNs	a. 2 by project 32 nurses b. 1 by project 10 parents	3	a. Hospital gift shop selling books recommended by project b. Using Mother's Questionnaire c. Using senior citizens to make toys and materials d. 3 nurses trained to set up parenting classes e. Teaching techniques of bonding and infant stimulation in prenatal classes f. Allow grandparents extended visiting privileges with their newborn grandchildren g. Encourage parents to bring in toys and clothes h. Take infants off floor to visit mothers when they are patients on other floors i. Developed questionnaire of own
St. Elizabeth's 401 E. 20th St. Covington, KY 292-4000	2831	8 RNs	a. 2 by project 14 nurses	7	a. Sent letters to pediatricians describing infant stimulation b. Conduct 3 parents classes weekly - include infant stimulation with infant care c. Made booklets for premature infants d. Using Mother's Questionnaire e. Made personal invitations for mothers to attend classes f. Encourage parents to bring toys for the infants g. Using pamphlets for parents recommended by nursing consortium

D. Evaluation of the impact of the nurses' outreach training.

1. We administered a pre- and post-test to short course participants to assess changes in attitudes and information and the result of an extended, shared learning experience. This evaluation has been helpful in several ways:
 - a. Evaluation of first four-day short course (October, 1980) provided the rationale for shortening course to three days and making some changes in the course agenda.
 - b. Information on the content of the short course increased by 30% on a pre- and post-test. With a possible score of 54 and a mean pre-test score of 23 or 42% correct answers, the post-test mean was 39 or 72% correct answers.
 - c. Presentors were reinforced by the favorable comments received from short course participants in the Evaluation. The teaching effectiveness of each presentor was evaluated by the course participants. This gave the presentors direction and necessary information needed to change their presentations at subsequent courses. As a result of these evaluations, some presentations, such as the case studies discussion and fiscal and budgetary planning within the hospital, have been dropped. Also, two presentations have been combined - the neurological and behavioral aspects of the infant. To meet the needs of the participants, we have added baby massage, innovations in the fullterm nurseries, and fathering. A majority answered that the audio-visual handouts were helpful. The generalized course questions have also shown many favorable results: 88% of the participants said that the program increased their interest in infant stimulation; 95% stated that the course covered what they expected, and 84% found the short course useful.
2. A Mother's Questionnaire for parents has been an important way of measuring positive changes in the hospitals which have occurred as a result of training. 25 mothers from each hospital were asked to complete the questionnaires prior to the time nurses began their infant stimulation programs. Some of the hospitals administered a repeat questionnaire in 3 months. Jewish Hospital mothers responded positively to 21% more of the questions in February than they had in November. There was an increase of 6% positive answers from the mothers at Our Lady of Mercy Hospital and 10% from the mothers at Fort Hamilton Hospital. The progress of the other hospitals will be compiled when the second questionnaires are returned.
3. The number of high-risk infants referred to the USEP central referral clearinghouse by nursing personnel has significantly increased during the past two and a half years. The percentage

rose from 9% in 1978 to 17% in 1980; during the first half of 1981, there has been an increase to 21%. The fifty nursing personnel referrals since February 1981 can be explained as an impact of the outreach training short courses.

Also the central referral coordinator (Donna Burns) was invited to speak about the USEP referral system at Children's Hospital, Cincinnati General Hospital, and at the Vulnerable Infant Workshop after her appearance on the agenda of the short course.

4. Documentation of positive changes in hospital nurseries as a result of training and on-site consultation occurred during monthly meetings of the nurses' consortium where representatives from each hospital exchanged information and progress. Nurses reported that infant capabilities and infant stimulation techniques were included in their bath demonstrations or child care classes; nurseries were using toys and bright colored decals or mobiles; parents were encouraged to bring new toys for the infants to the hospitals; and hospital gift shops have been recommended to supply four parent books which were chosen by the consortium. The hospitals have set up infant stimulation committees which they indicated was necessary for serious implementation of the course content.
5. Letters of support and documentation of program development in each of the participating hospitals attest to the value of the outreach training program. A common comment from the nursing staff is that increased knowledge of infant stimulation techniques, infant capabilities, and knowledge of parent-infant bonding have enabled them to provide improved nursing care to infants and their families. An additional value of the infant stimulation programs is to nursing personnel and other professionals who reap the rewards of initiating the affectionate bonding and attachment of parent to infant. The course has been highly recommended, resulting in additional personnel from each hospital attending subsequent short courses.
6. A Cincinnati Enquirer feature newspaper story about the infant stimulation/parent support program at CGH, the CGH special care nursery program on Channel 2-TV in Dayton, Channel 9-TV in Cincinnati, and a 15 minute radio interview are all evidences of the positive impact of outreach training carried out during Years 1 & 2.