

Effectiveness of Breastfeeding Peer Counseling in a Low-income, Predominantly Latina Population:

A Randomized Controlled Trial

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Outline

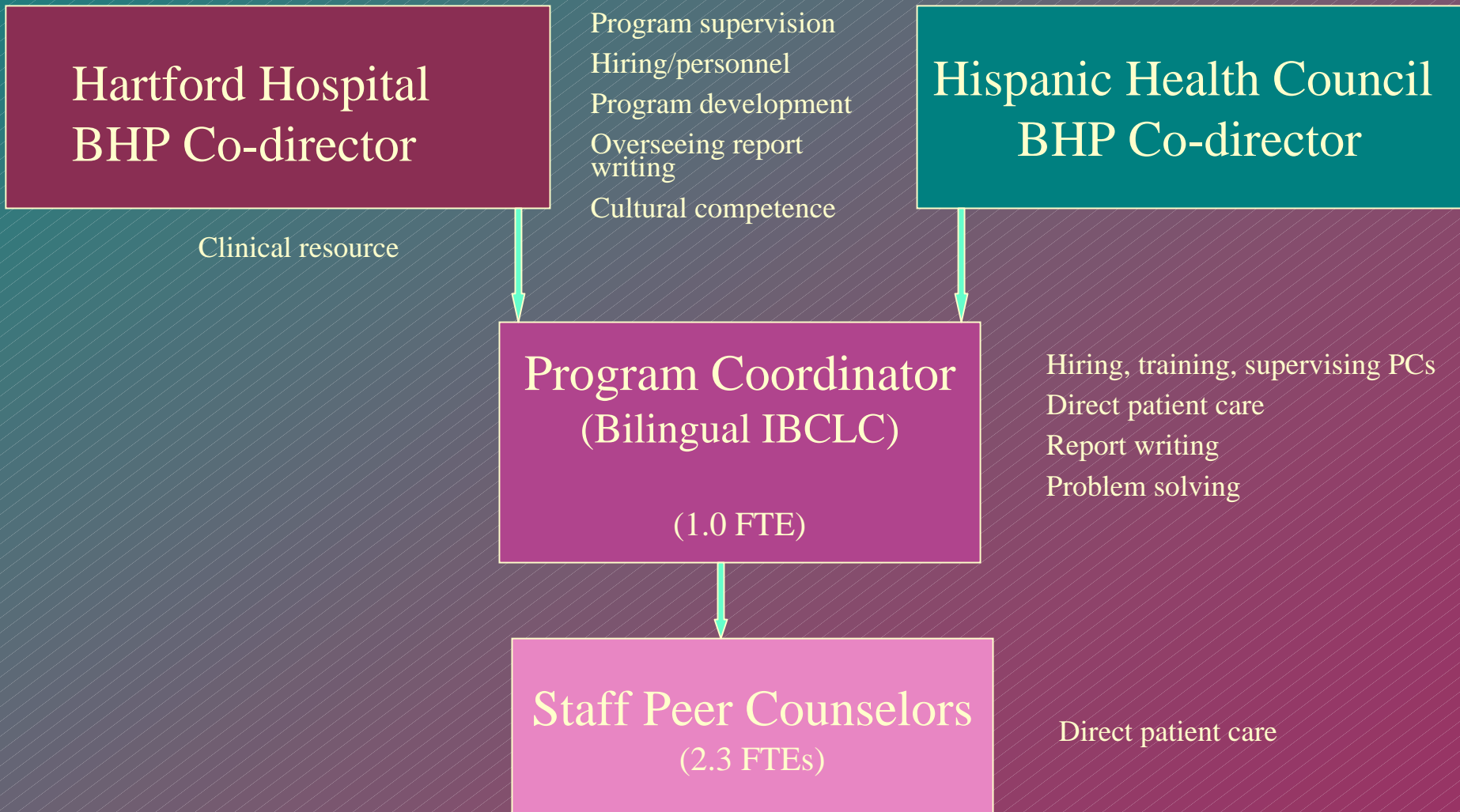
- Beginnings of this study
- Development of research proposal
- Results
- Publication Process
- Questions

STUDY BEGINNINGS

Breastfeeding: Heritage and Pride

- Collaborative effort between:
 - Hartford Hospital
 - The Hispanic Health Council
 - University of Connecticut Family Nutrition Program
- Funding:
 - UConn FNP (USDA Food Stamp Program)
 - Hartford Hospital

BHP Organization



Peer Counselor Qualifications

- Breastfed a child for at least 6 months
- Successful completion of peer counselor training
- High school graduate
- Entry level wage: \$12/hr
- Benefit package if working at least 20 hr/week

Peer Counselor Training

- 30 hours classroom training
- Combined curricula of LLLI and HHC
- Score > 85% on exam
- 3-6 months supervised work experience
- Biweekly case review meetings with coordinator
- Biweekly continuing education

Local questions regarding PC

- Managed care task force politics
- Reimbursement issues
- PC effective in developing countries
 - Are they effective in DEVELOPED countries?
- Existing program not scientifically evaluated

Peer Counseling (PC) Studies

- US randomized trials
 - Team approach (PC + Community Health RN):
 - Improved BF rates, but not significantly (Pugh et al, Birth, 2002)
- US observational studies
 - Suggest positive impact on BF initiation and duration (Kistin, 1994; Shaw, 1995; Long, 1995; Arlotti, 1998)
 - WIC studies: higher BF incidence in clinics with PC (Ahluwalia, 2000; Grummer-Strawn, 1997)

Lay Support for Breastfeeding

(2002 Cochrane Review)

	Country	N	Intervention	Outcomes	Results (PC vs control)
Jenner (1998)	England	38	2 prenatal HV 1 perinatal 2-3 pp HV Telephone	EBF at 3 mo pp	68.0 vs 21.0 ($p < 0.01$)
Leite (1998)	Brazil	762	5 pp HV	Any BF at 6 mo pp	42.2 vs 36.2 ($p < 0.05$)
Morrow (1999)	Mexico	130	(pre,peri,pp) A. (2, 1, 3) B. (1, 1, 1)	EBF at 3 mo pp Any BF at 3 mo pp	EBF: 67%(A) vs 50%(B) vs 12% A vs B, $p=0.02$, A+B vs C, $p<0.001$ Any BF: 95% (A+B) vs 85% (C) ($P<0.05$)
Haider	Bangla- desh	513	2 pre HV 1 peri 12 pp HV	EBF at 5 mo pp	70.0% vs 6.0% $P<0.0001$

Lay Support for Breastfeeding

(2002 Cochrane Review)

	Country	N	Intervention	Outcomes	Results (PC vs Controls)
Dennis, 2002	Canada	256	Postpartum Telephone contact	EBF and any BF at 3 mo pp	81.1 vs 66.9% EBF 56.8 vs 40.3% Any BF (p<0.01 for both)
Mongeon, 1995	Canada	200	1 pre HV Telephone weekly 1-6 wks pp, 2X/m through 5 mo	BF rates at 6 mo pp	25 vs 20% (NS)
Morrell, 2000	UK	293	10 pp HV by Support worker	EBF and Any BF at 6 mo pp	12.6 vs 12.0% EBF 20.0 vs 20.6% any BF (both NS)

Development of Research Proposal

Questions still unanswered

- Is BF peer counseling effective in the US?
- Do low-income US Latinas respond to breastfeeding peer counseling?

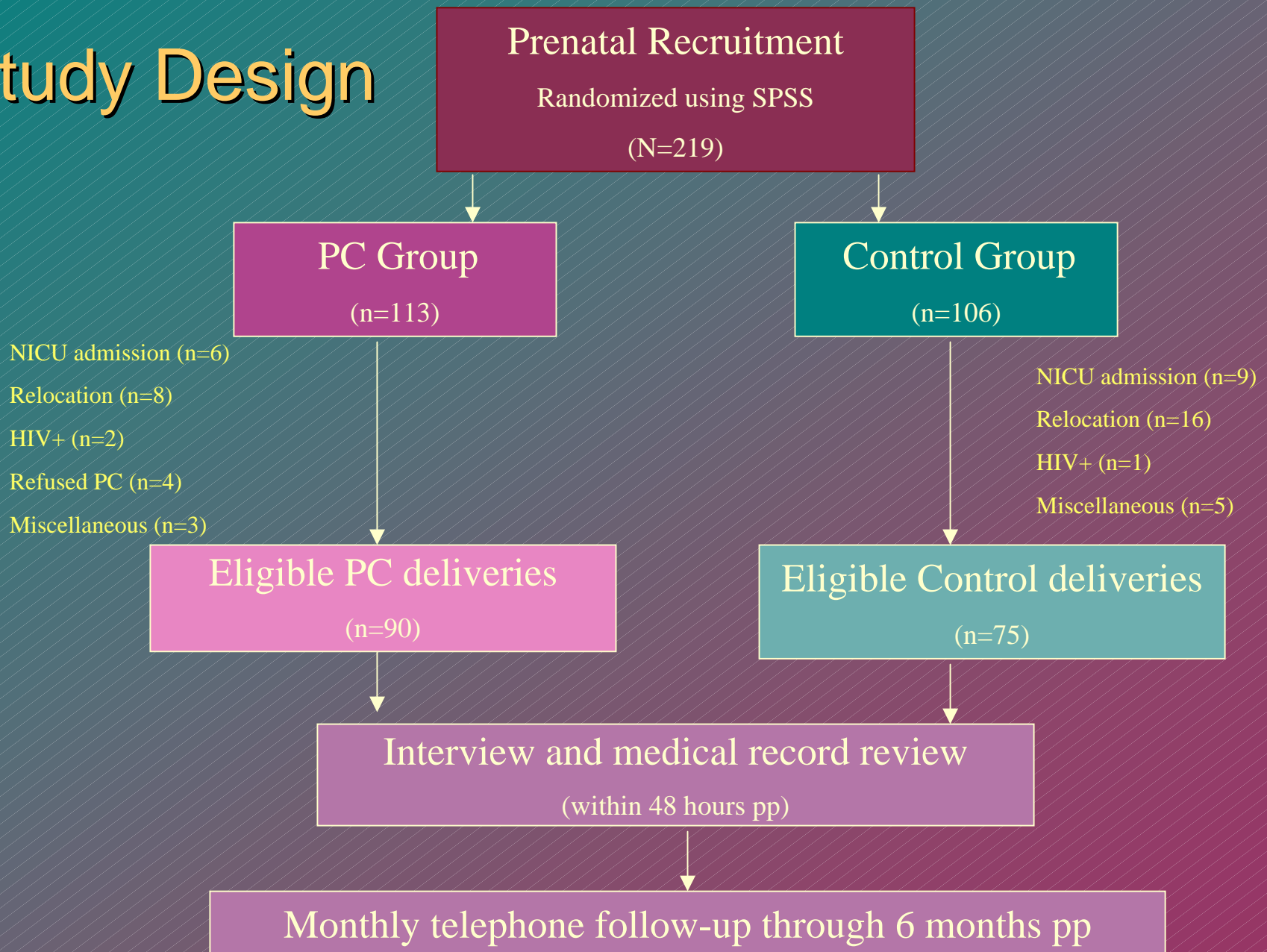
Objective

- To assess the effectiveness of an existing breastfeeding peer counseling program serving a predominantly low-income Latina population in Hartford, CT

Recruitment and Inclusion Criteria

- Recruitment
 - 10/2000 through 8/2002
 - Prenatal recruitment by bilingual interviewer
 - Informed consent obtained
- Inclusion criteria (Prenatal)
 - At least 18 years old
 - Considering BF this infant
 - Residents of Greater Hartford area
 - Available for telephone follow-up
 - Low income
 - No more than 26 weeks gestation
 - Not enrolled in PC program
- Inclusion criteria (Postpartum)
 - Healthy, term singleton
 - No congenital anomalies
 - No maternal history of HIV
 - No admission to NICU

Study Design



Control procedures

- Prenatal BF support
 - Individualized information by health care providers
 - Written BF educational materials
- Perinatal BF support
 - Hands-on assistance by staff RNs
 - Written BF materials
 - Access to LC for serious BF problems
- Postpartum BF support
 - Warm Line: RN answers BF questions over phone
- Hartford Hospital: certified as “Baby Friendly”

Prenatal Peer Counseling Protocol

Routine services plus:

- One home visit
 - Benefits of BF
 - Review positioning
 - Anticipatory guidance
 - Written materials
 - Check for inverted nipples
 - Discuss breastfeeding myths
 - Breastfeeding video discussed
- Additional prenatal visits if necessary

Perinatal Peer Counseling Protocol

Routine services plus:

- At least 1 visit/day
- Hands-on assistance with positioning and latch
- Education on:
 - Infant feeding cues
 - Expected BF frequency
 - Signs of adequate lactation
 - Management of common problems
- Emergency beeper number provided

Postpartum PC Protocol

Routine services plus:

- 1 home visit within 24 hours of hospital discharge
- 2 additional home visits
- Free mini-electric pump loan available
- PC available by pager
 - Unlimited telephone contact
- Additional contact as needed

Data collection

- Prenatal: Demographics, infant feeding plans
- Perinatal: Infant feeding and demographic data, sources of pre- and perinatal BF education, medical record review
- Postpartum: Monthly telephone interviews until they stopped BF or for a maximum of 6 months pp
 - Infant feeding practices
 - Demographics
 - Sources of BF support*

*Interview structured to avoid bias

Statistical Analyses

- Sample size estimation
 - Hand calculations
 - Statisticians often consulted
- Chi square
 - Differences in BF rates at birth, 1,3 and 6 mo pp
- Cox regression
 - Duration of any breastfeeding
- Statistical significance: $p < 0.05$, Interactions: $p < 0.10$

Funding Sources

- Center for Disease Control through subcontract with the Association of Teachers of Preventive Medicine (ATPM)
- Connecticut Family Nutrition Program for Infants, Toddlers, and Children
- Hartford Hospital

Challenges Faced

- Recruitment slower than anticipated
- Discontent of staff regarding “fairness” of randomization
- Staffing issues within the PC program
 - Understaffed for ½ of the study

RESULTS

Subject Characteristics

	PC	Controls
Age (years)	25.0 ± 5.6	24.6 ± 6.2
Education (years)	11.4 ± 2.9	11.8 ± 2.3
USA residence (years)	12.3 ± 10.2	13.3 ± 9.0
Intended BF duration (mo)	6.3 ± 3.8	7.0 ± 4.8
Routine prenatal BF education (minutes)	22.7 ± 29.8	27.5 ± 45.5

Subject Characteristics

	% PC	% Controls
Ethnicity		
Hispanic (%)	80.0	80.0
African American	8.9	8.0
Caucasian	3.3	4.0
Other	7.8	8.0
Hispanic Origin		
Puerto Rico (%)	61.1	61.0
Married (%)	18.0	29.3
Primiparous (%)	42.2	42.7
Unemployed (%)	62.9	62.7
Breastfed as an infant (%)	51.2	48.5
Unsure about BF at recruitment (%)	15.6	24.0

Prenatal PC Contact

51% coverage

Duration per subject recall (minutes)	69.0 ± 57.6
CONTENT AREAS	
BF positions (% yes)	88.1
Received BF brochures (% yes)	90.5
BF myths (% yes)	90.2
Use of manual breast pump (% yes)	73.8
BF video (% yes)	45.2

Perinatal coverage

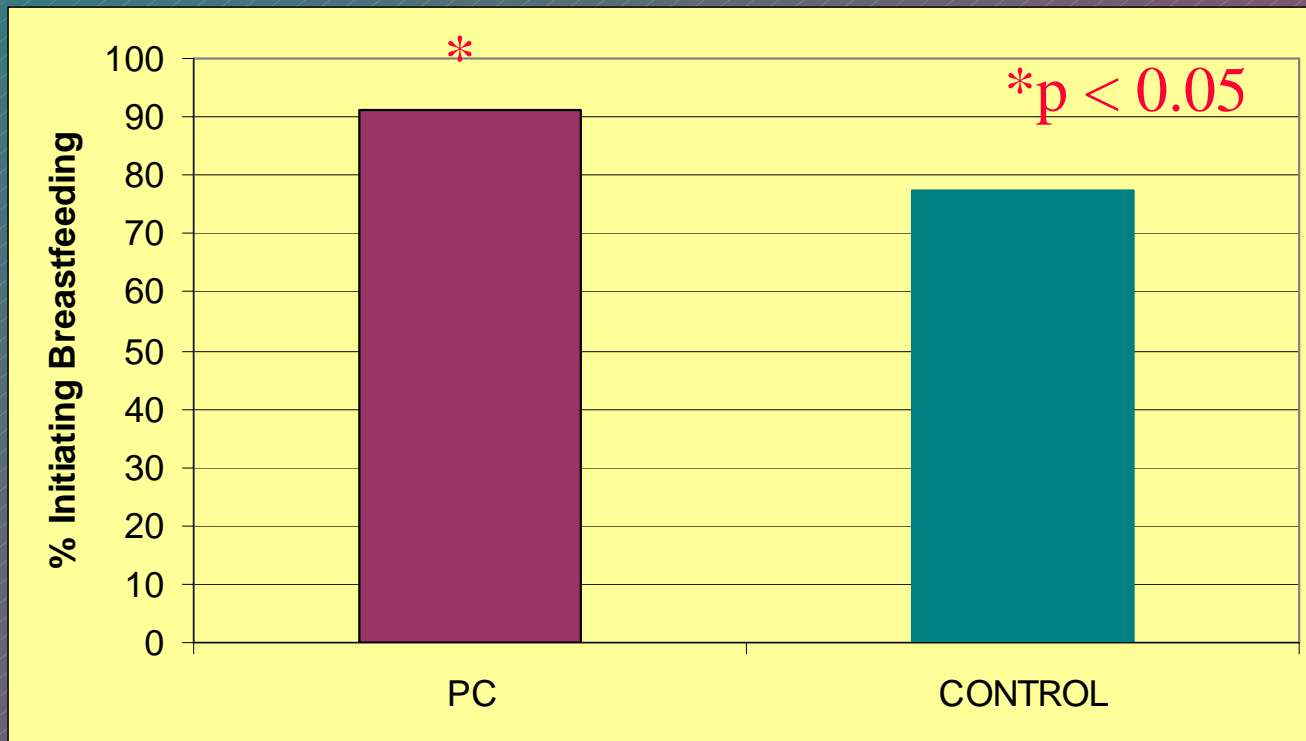
Duration of perinatal contact (total minutes)	63.8 ± 123.0
# perinatal visits (subject recall)	2.7 ± 3.7

Postpartum coverage

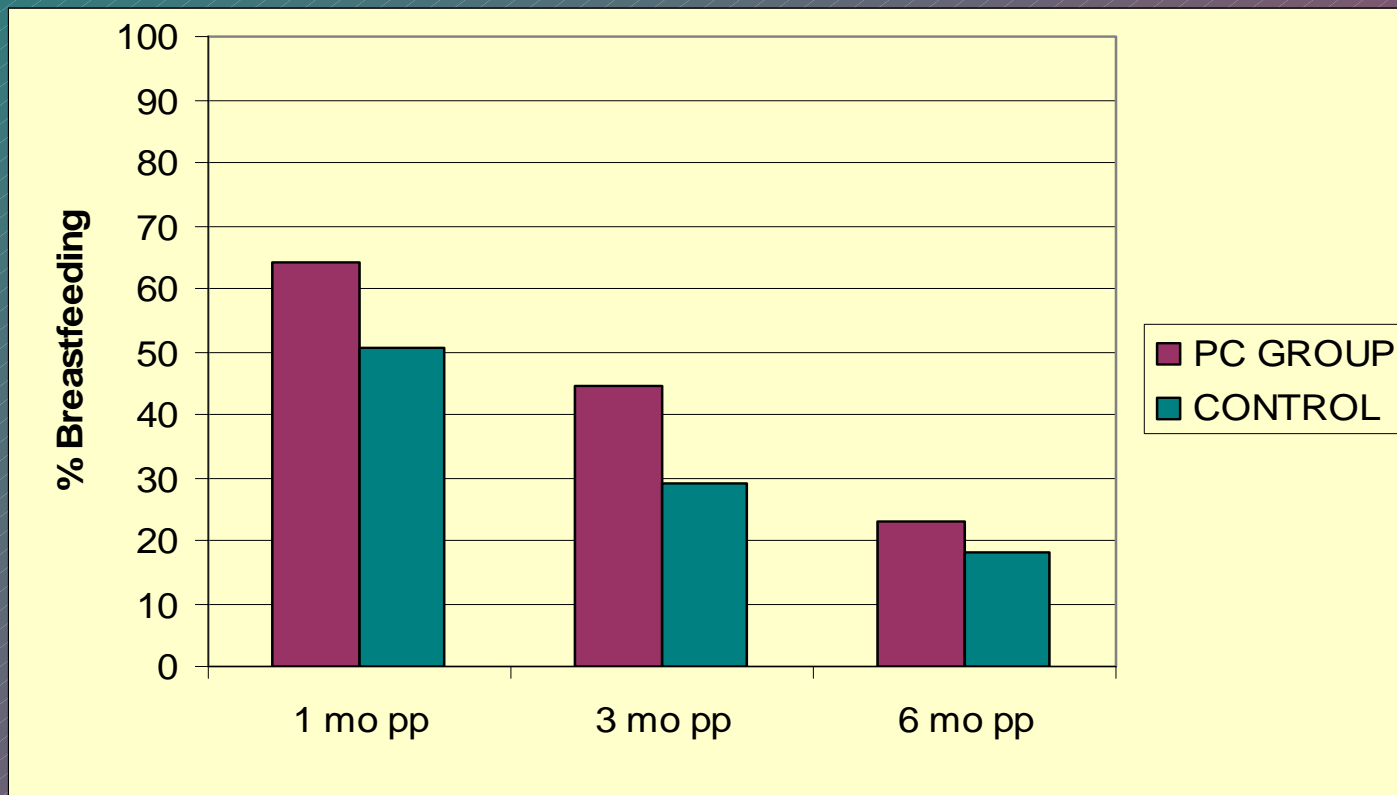
(In 1st month pp, among subjects initiating BF, n=71)

Postpartum contact summary	
# Home visits in 1 st month pp (mean \pm SD)	1.2 \pm 1.6
# Phone calls in 1 st month pp (mean \pm SD)	1.8 \pm 3.1

Results: Breastfeeding Initiation (N=165)

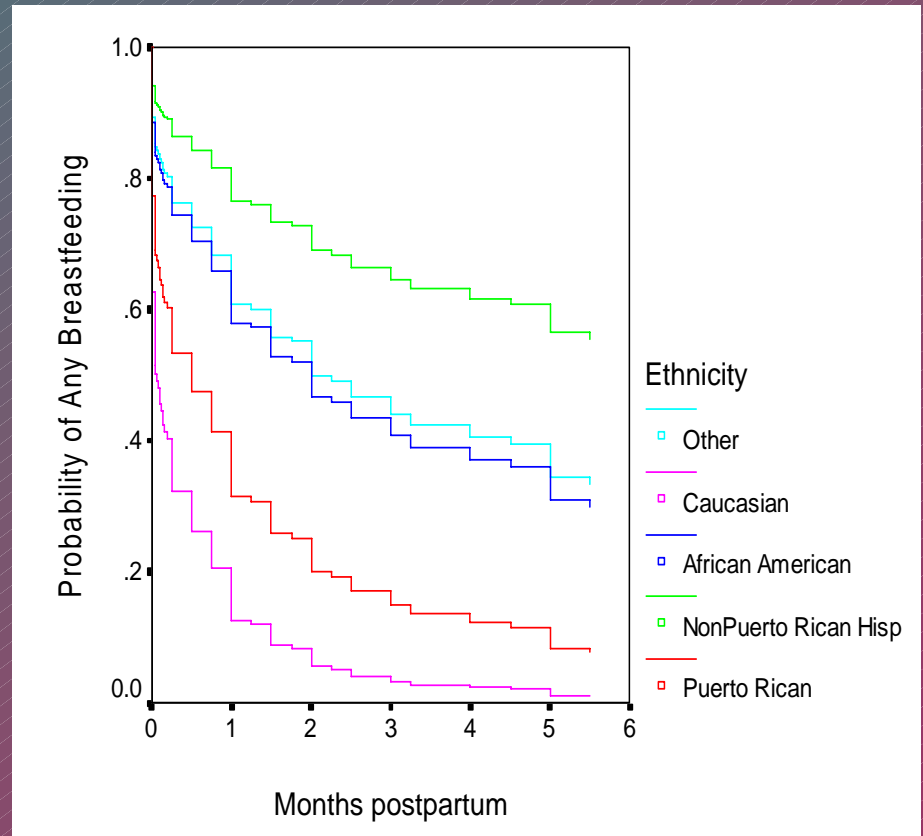


Results: Breastfeeding Rates (Any BF)



Median BF duration by Ethnic groups (N=157)

Ethnicity	n	Median BF duration (mo.)
Non-PR Hispanic	75	> 6.0
Other	13	2.0
African American	13	1.85
Puerto Rican	75	0.39
Caucasian	6	0.05



Conclusions

- Breastfeeding peer counselors have a significant, positive impact on breastfeeding rates among a low-income, primarily Latina population
- Conservative estimate of the impact of PC
 - All subjects eligible to receive free formula
 - PC program understaffed for half of study period
- Hispanic populations vary in their breastfeeding practices

Implications for Nursing

Peer counselors: an asset to the health care team

- Complement RN, IBCLC services
 - Important with RN shortage
- Relate well to their peers
 - Understand culture
 - “Speak the language”
 - Role models
- Improve health related behaviors

Publication Process

- Why publish?
 - Share important findings
 - Support changes in health care policy (ie. WIC)
 - Encourage replication of successful program
 - Funding requires documentation of effectiveness
- Process of manuscript preparation
 - Analyze data
 - Present results in tables and figures
 - Start writing!
 - First draft doesn't have to be wonderful
 - Start with conversational style, if necessary

Journal Selection

- Choosing the journal to publish
 - Consider the audience
 - Prior success with other publications
- Our process
 - High impact, Wanted policy makers to read it
 - Pediatrics- reviewed but rejected
 - JAMA- not reviewed, rejected
 - Archives of Ped. Adolsc Med-accepted!

Steps in Editorial Process

- Manuscript submission
- Acceptance with “minor” revisions
 - Cut word count by 25%
 - Revise statistical presentation
 - Response to reviewers
- Proof-read page proofs online (w/i 48 hours)
 - Serious problems with 2 figures
- 2nd review of figures

Tips for Potential Authors

- Don't procrastinate:
 - Break it into small pieces to fit small blocks of time
- Drafts don't need to be perfect
- Patience with publication process
 - Manuscript reviews (even unfavorable) usually contain valuable feedback
- Don't take rejection personally
- Collaboration is essential

Questions?