A Rural, Medically Underserved Community Breastfeeding Intervention in Pediatric Primary Care

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Practice Setting

Rural North Georgia, southern Appalachia, medically underserved area
6 Providers
2 FT MDs, 2 PT MDs, 1 FT PNP, 1 PT FNP/RLC
Spanish speaking population = 4.83%; Employs 2 Spanish-speaking translators
Practice panel= 3500 patients
Breastfeeding rates
23.7% exclusively breastfeeding at 2 months
(U.S. 40.7% & GA 27.2% exclusively breastfeeding/3 months)
14.3% exclusively breastfeeding at 4 months
(U.S. 18.8% & GA 14.5% exclusively breastfeeding/6 months)

QI Project Aim and Goals

Overall Aim: to increase breastfeeding rates through a NP-led breastfeeding intervention refining care provided to a diverse patient population with historically low breastfeeding rates.

Goals: to increase "exclusive," "partial" and "any" breastfeeding by at least 10% after implementing the ABM's (2013) *Clinical Protocol #14: Breastfeeding Friendly Physician's Office: Optimizing Care for Infant and Children*, at 1. breastfeeding initiation (as measured at the newborn visit) and 2. continuation (as measured at the 1-month, 2-month and 4-month well child visits)

Methods

Procedure

- ABM's (2013) "Clinical Protocol #14" was implemented, refining the breastfeeding care already provided in this diverse population.
- Implementation was led by a dually-certified Nurse Practitioner/Lactation Consultant.
- Of the 19 recommendations within this protocol, current practice already included, partially or fully, 12 of the recommendations. These 12 recommendations were further clarified and/or utilization was improved, and the additional 7 recommendations were put into practice as part of this new implementation

Data Collection and Plan

- Before-and-after design
  - Two independent groups of healthy mother-infant couplets
    - Pre-implementation (N=43) November 2013-June 2014
    - Post-implementation (N=45) July 2014-February 2015
- Evaluated at newborn visit, 1-month, 2-month and 4-month WCC
- Approved by the Duke University IRB and classified exempt

Data Analysis

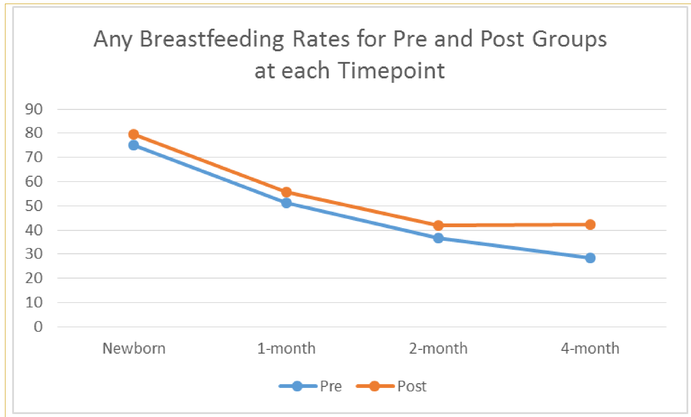
- Relationships for the two groups were compared using two-sample *t* tests, Chi square, and Fisher's exact tests.

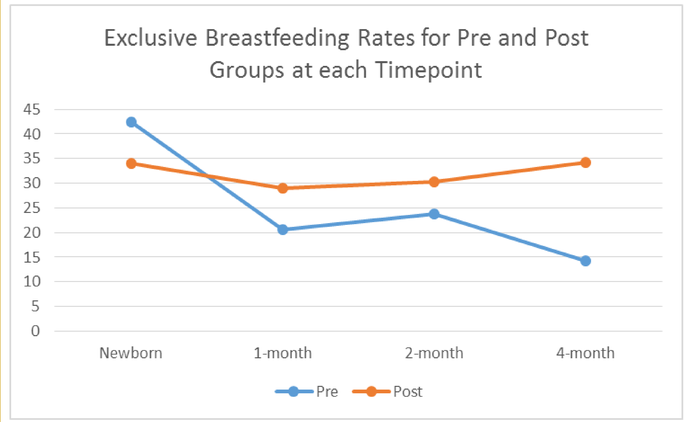
Results

	Pre	Post	
Demographic Characteristic	Mean (SD)	Mean (SD)	p-value
Maternal Age	26.00(4.79)	28.71(5.86)	.02[a]
Parity	1.79 (.91)	2.02 (.94)	.25 [a]
Infant Birth weight (g)	3417(444)	3381(435)	.71 [a]
	No. (%)	No. (%)	
Infant Gender			.09 [b]
Female	26(60.5)	19(42.2)	
Male	17(39.5)	26(57.8)	

	Pre	Post	
Demographic Characteristic	No. (%)	No. (%)	p-value
Insurance			.08 [c]
Private	7(16.3)	16(35.6)	
Public	35(81.4)	29(64.4)	
Self-Pay	1(2.3)	0(0.0)	
Previous Breastfeeding	11(30.6)	19(43.2)	.35 [b]
Delivery Type			.62 [b]
Vaginal	33(78.6)	33(73.3)	
Cesarean Section	9(21.4)	12(26.7)	
WIC Participation	19(76.0)	24(53.3)	.08 [b]

Demographic Characteristics for Pre-and Post-Intervention Groups
Note. [a] denotes two sample t-test; [b] denotes Fisher's exact test; [c] denotes Chi Square test.





Summary of Findings

- A relationship existed between implementing a breastfeeding-friendly office protocol and improved breastfeeding rates over the four time intervals.
- Although none reached significance, post-implementation rates for any breastfeeding progressively increased for each time point. Exclusive breastfeeding rates increased by 40.98% at the 1-month visit (p=.45), 27.4% at the 2-month visit (p=.62), and 139% at the 4-month visit. (p= .06+).
- An inverse relationship exists within the post-implementation exclusive breastfeeding rates and partial breastfeeding rates; as exclusive breastfeeding rates increased, partial breastfeeding rates decreased.

Application to Future Practice

- This NP-led QI project supports primary care office implementation of the ABM's Clinical Protocol #14
- Establishing "breastfeeding-friendly primary care offices" is feasible with the adaptable ABM clinical protocol #14
- Results support improved breastfeeding rates in primary care even in a setting with high risk for low breastfeeding rates