

ANNUAL MEETING ABSTRACTS

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WIC PROGRAM PERSONNEL IN PUERTO RICO: KNOWLEDGE ABOUT BREASTFEEDING

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Eighty-four percent of the more than 60,000 infants born in Puerto Rico every year are eligible to participate in the WIC Program. Knowledge and attitudes of this personnel is an important source of information for women in the reproductive age group. The objective of our study was to identify the level of knowledge about breastfeeding among WIC personnel throughout the island. A self-administered questionnaire was answered by 634 (79.2%) employees. Women constituted 83% of the sample, the median age was 40 years and the average education was at the college level. Administrative personnel made up 44.5%, nurses 23.6%, non-professional support personnel 20.9% and dietitians 11%. Among participants, 13.3% had breastfed exclusively, 41.6% used breast milk plus formula and 45.1% used only formula. Multiple areas of insufficient knowledge were found in the studied sample. Among these, 69% believe that mothers know how to breastfeed by instinct, 66% think the breastfeeding mother has to follow a specific diet, 53.5% think that breastfeeding is a difficult and painful process, 45.9% believe that formula should supplement breast milk and 42.1% think that formula offers the best possible nutrition for the baby. The authors conclude that effective educational strategies are necessary to improve the level of knowledge about breastfeeding among WIC personnel in Puerto Rico.

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ATTITUDES TOWARDS BREASTFEEDING IN PUBLIC OF WIC PROGRAM PERSONNEL IN PUERTO RICO

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Eighty-four percent of infants born in Puerto Rico are eligible to participate in the WIC Program. Knowledge and attitudes of this personnel is an important source of information for women in the reproductive age group. Attitudes towards breastfeeding in public of WIC personnel throughout the island was the object of our study. A self-administered questionnaire was answered by 634 (79.2%) of WIC employees. Eleven possible scenarios for breastfeeding were presented to participants with a Yes/No answering scale. Women constituted 83% of the sample, the median age was 40 years and the average education was at the university level. Nurses made up 23.6%, dietitians 11%, non-professional support personnel 20.9% and administrative personnel 44.5%. Among participants, 13.3% breastfed exclusively, 41.6% gave breast milk plus formula, and 45.1% used only formula. Only 16.2% of the participants had a positive attitude towards breastfeeding in public, while 83.8% had a negative attitude. A significant association ($p < 0.001$) was found between the type of position occupied and a positive attitude towards breastfeeding in public, with 24.1% of the nurses, 30.9% of the dietitians and only 10.9% of administrative personnel and peer counselors. Results indicate that active efforts need to be carried out among WIC personnel to increase a positive attitude towards breastfeeding in public, with special emphasis placed among the non-professional support personnel and administrative personnel.

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EFFECT OF FENUGREEK ON BREAST MILK VOLUME

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Background: Fenugreek is a popular herb used in the lay population as a galactagogue though scientific research regarding efficacy has not been published. **Objective:** To assess the effect of fenugreek on breast milk production in exclusively breast-pumping women. **Methods:** Ten women kept diaries of their breast milk production for two weeks. The first week established baseline milk production. During the second week three capsules of fenugreek seed were taken three times daily. This observational study used each patient as her own control in comparing breast milk production with and without the fenugreek. **Results:** Average daily pump volumes for week 1 and week 2 were compared. These values were statistically analyzed using the Wilcoxon signed rank test. The average daily milk volume for week 1 was 207 ml compared to 464 for week 2. This increase was statistically significant ($P = 0.004$). **Conclusion:** The use of fenugreek significantly increased volume of breastmilk produced. Further study of the herb and its effects on the lactating breast is certainly warranted. The use of fenugreek to improve lactation could offer help to women with insufficient supply.

TRANSMISSION OF CYTOMEGALOVIRUS (CMV) THROUGH HUMAN MILK: A HAZARD FOR PRETERM NEONATES?

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Background: The possibility of CMV transmission via human milk has caused concern among neonatologists. **Purpose:** To assess the risk of milk-acquired CMV infection for premature infants. **Methods:** Review of currently available literature. **Results:** In industrialized countries, roughly 50% of pregnant women are seropositive for anti-CMV antibodies. Transmission via breast milk is frequent, but harmless for term or near-term infants. In contrast, symptoms of CMV infection in preterm infants vary from asymptomatic neutropenia to sepsis-like disease with prolonged oxygen requirement and severe neurologic handicap. Babies from mothers who seroconvert during early lactation seem to be at highest risk for milk-acquired CMV infection. However, viroemia is also frequent (up to 85%) in mothers who have seroconverted before pregnancy (Vochem *et al.*, 1998), probably due to local virus reactivation in breast leukocytes. Maximum virus loads have been observed between weeks 4 and 12 of lactation, whereas CMV has rarely been detected in colostrum. (Stagno *et al.*, 1980) The numerous benefits of human milk in terms of outcome and prognosis especially for very immature infants are undisputed. On the other hand, while the seriousness of congenital CMV infection has often been demonstrated, there is little information available about the frequency of milk-borne CMV transmission causing severe disease in preterm neonates. In one study, only the smallest infants of 24 to 26 weeks of gestation developed marked symptoms of acute CMV infection. (Vochem 1998). There has been emerging controversy if, under these circumstances, human milk should be heat-treated or even withheld from infants at risk. Holder pasteurization (62.5°C; 30 min.) abrogates CMV activity but also inactivates live cells and many bioactive components. (Ford *et al.* 1977; Evans *et al.* 1978, Goldman *et al.* 1997, Wardell *et al.* 1984, Paxson *et al.*, 1979) Consequently, infants fed pasteurized human milk have higher infection rates than those on untreated milk. (Narayanan 1984) **Conclusions:** The attributable risk of breastfeeding to serious CMV disease in preterm infants is as yet unknown. It remains to be established and those children at highest risk have to be characterized, before general management recommendations can be formulated. To this end, a prospective clinical trial comparing outcomes in infants fed untreated breastmilk vs. pasteurized breastmilk and formula is proposed.

DO BREASTFED BABIES WHOSE MOTHERS HAVE HAD LABOR EPIDURALS LOSE MORE WEIGHT IN THE FIRST 24 HOURS OF LIFE?

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While there is evidence that babies who have been exposed to epidurals take longer on average to learn to breastfeed, the reasons for this are not well understood. Epidural analgesia is generally accompanied by increased intrapartum intravenous fluid delivery, thus a baby born to a mother who has had an epidural would be expected to be born more hydrated than their non-epidural counterparts. This better hydration status could be reflected in higher birthweights and greater weight loss in the neonatal period. A better understanding of the hydration of neonates and influences of their weights will lead to a better understanding and management of nursing behavior and weight loss paradigms for those born to mothers who have had epidural analgesia. The labor and delivery records of 85 mother and baby pairs delivering at Providence St. Peter Hospital in Olympia, WA, in 1999 were analyzed retrospectively. All of these mothers had uncomplicated vaginal deliveries and were breastfeeding. Information on birthweight, breastfeeding assessment and day 1 weight were compared between the epidural and non-epidural group. At birth, those babies in the epidural group weighed on average 3645 grams compared with 3391 grams for the non-epidural group ($p < 0.005$). For the 39 babies with documented day one weights, the average weight loss in the first day for those in the epidural group was 226 grams compared with 142 grams for the non-epidural group ($p = 0.005$). Neonates born to mothers who have had epidurals during labor weigh more at birth and can be expected to lose more weight in the first day of life than those born to mothers who did not have epidural analgesia. If larger studies confirm this finding, this may provide reassurance that babies whose mothers have had epidurals can safely take longer to learn to breastfeed, and are likely to lose more weight in the newborn period before becoming dehydrated.

FEMALE PHYSICIANS AS BREASTFEEDING ROLE MODELS?

Rebecca B. Saenz, MD, IBCLC and Chris R. Arthur, PhD, CHES

Background: Since women often look to female physicians as role models in personal health and lifestyle choices, we surveyed female physicians to determine their breastfeeding practices. **Purpose:** To determine to what extent female physicians in Mississippi follow published recommendations for breastfeeding their own children. **Methods:** Female members of the Mississippi State Medical Association were surveyed by mail regarding their recommendations to patients regarding breastfeeding, and their own personal breastfeeding history. **Results:** The majority of female physicians in Mississippi both recommend breastfeeding and have breastfed their biological children. However, most have used formula supplementation, and very few have breastfed for 12 months or greater. Most cited various problems with breastfeeding as reasons for timing of weaning. **Conclusions:** Female physicians are a large potential target audience for enhanced breastfeeding education, with the potential to influence both peers and patients. Funding support: not applicable