



Antenatal Formula Distribution: Effect on Breastfeeding

**THIRTY-
SECOND**

in a Series

of Seminars

on MCHB-funded

Research Projects

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Parklawn Building, Conference Room D
Rockville, Maryland

Presenter: Cynthia R. Howard, M.D., M.P.H.

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Reactor: José J. Gorrín, M.D., M.P.H., F.A.C.O.G.

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Moderator: David E. Heppel, M.D.

DIRECTOR, DIVISION OF CHILD, ADOLESCENT AND FAMILY HEALTH
MATERNAL AND CHILD HEALTH BUREAU

Bring your lunch, and enjoy the desserts and beverages provided.



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Research Roundtable

About the Presenter...

Cynthia R. Howard, M.D., M.P.H., is associate professor in the Department of Pediatrics at the University of Rochester School of Medicine and Dentistry. Her clinical responsibilities include serving as the pediatric director of the Mother-Baby Unit at Rochester General Hospital. Dr. Howard co-chairs the Breastfeeding Subcommittee of the New York State Chapter of the American Academy of Pediatrics, serves on the Academy of Breastfeeding Medicine's board of directors, and chairs its committee on hospital protocols and practices. A member of the professional advisory board of LaLeche League International, Dr. Howard chaired the program committee for LaLeche League's annual physicians seminar in 1999 and 2000. She is a member of the editorial board of *Birth* and is editor of *News and Views*, a publication of the Academy of Breastfeeding Medicine.

About the Reactor...

José J. Gorrín, M.D., M.P.H., is professor and director of the Maternal and Child Health Program and the Department of Human Development at the University of Puerto Rico Graduate School of Public Health, where he served as Associate Dean for Academic Affairs. Dr. Gorrín is a board-certified obstetrician-gynecologist and a fellow of the American College of Obstetricians and Gynecologists. His research interests in reproductive health focus on pregnancy and delivery, breastfeeding, low birthweight, infant mortality, and empowerment strategies for women. He has published in the *Puerto Rico Health Sciences Journal* and has authored book chapters on public health and reproductive health.

Antenatal Formula Distribution: Effect on Breastfeeding

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Cynthia R. Howard, M.D., M.P.H.
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Statement of the Problem

Breastmilk is acknowledged as the optimal means of nourishing infants. In the early 1990s, infant formula manufacturers initiated marketing practices through obstetric offices, involving the distribution of attractively packaged advertising, formula samples, and free formula offers. Today, these infant feeding

materials are widely used in obstetric offices to educate pregnant women about infant feeding. The manufacturers state that the materials and formula samples are provided as a patient service, designed to support breastfeeding but also to promote the use of a safe alternative when breastfeeding is not chosen. However, the use of commercially produced educational materials and formula samples in hospitals dur-



ing the postpartum period has been shown to be detrimental to breastfeeding. In formulating this study, we believed there was reason to hypothesize that the distribution of these commercial materials and formula samples during the prenatal period might be equally detrimental.

Research Questions or Hypotheses

The research hypotheses involved a comparison between two types of infant feeding materials: (1) commercial infant formula promotion materials distributed to pregnant women in obstetric offices, and (2) noncommercial infant feeding materials that conform to World Health Organization codes for marketing of breastmilk substitutes. This study tested the following hypotheses: Compared to noncommercial infant feeding materials, the commercial infant formula promotional materials distributed prenatally in obstetric offices

1. Decrease breastfeeding initiation rates;
2. Increase rates of early breastfeeding cessation at two specific timepoints: peripartum (prior to hospital discharge), and < 2 weeks postpartum;
3. Decrease the duration of exclusive, full, and partial breastfeeding; and
4. Decrease the likelihood that the mother will attain her personal goals for breastfeeding duration.

Study Design and Methods

A randomized, investigator-blinded, clinical trial was conducted to evaluate the effects of prenatal distribution of commercial formula promotional materials compared to noncommercial infant feeding educational materials on breastfeeding initiation, duration, and other infant feeding outcomes. At their first prenatal visit, 547 pregnant women were randomly assigned to one of two groups: those who received a commercial formula pack or those who received a noncommercial pack as part of the prenatal education materials. Postpartum interviews prior to hospital discharge and chart reviews were the two methods used to evaluate the effect of the intervention on breastfeeding initiation.

The postnatal study, in which the breastfeeding women participated in a series of telephone interviews over the next 6 months, evaluated the effects of the intervention on breastfeeding duration and on the likelihood of attaining personal breastfeeding goals. Subgroup analyses were conducted for four groups of

women at risk: those who had low educational levels, primiparous status, cesarean delivery, or uncertain or short-term (≤ 12 weeks) breastfeeding goals.

Findings

The study findings demonstrate that the distribution of commercial feeding materials and formula samples in obstetric offices adversely affects breastfeeding duration. Following are the findings based on each of the four hypotheses.

Hypothesis 1: There were no significant differences between the groups in breastfeeding initiation. We saw no evidence to suggest that the intervention had a significant effect on the women's choice of infant feeding method.

Hypothesis 2: The effects of the intervention on early breastfeeding cessation were assessed prior to hospital discharge and < 2 weeks postpartum. Peripartum (in-hospital) breastfeeding cessation was significantly higher in the group that received commercial formula promotional materials; cessation of breastfeeding < 2 weeks postpartum was also higher in this group.

Hypothesis 3: Declines in long-term breastfeeding duration were noted in all categories of breastfeeding among women who received commercial formula packs, although none of these differences reached statistical significance. However, subgroup analyses did demonstrate statistically and clinically significant decreases in duration as a result of the commercial intervention among women with undefined or short-term (≤ 12 weeks) breastfeeding goals. In this subgroup, comprising 43 percent of the study participants, the women in the commercial group experienced decreased duration of breastfeeding, with an average decrease of 11 days in exclusive breastfeeding, 20 days in full breastfeeding, and 35 days in partial breastfeeding.

Hypothesis 4: Among the women who had a defined goal for breastfeeding, the intervention did not affect the likelihood that they would attain their personal goal.

Recommendations

The study findings confirm that the distribution of commercial formula promotional materials and samples in obstetric offices adversely affects breastfeeding duration. The breastfeeding success of substantial numbers of women is placed at risk by the widespread

use of such commercial promotional materials in obstetric offices.

We believe the study findings support the elimination of commercial formula promotion products in prenatal settings. The distribution of such commercial materials prenatally is counterproductive to our nation's health goals because pregnant women who receive these materials may experience significant declines in breastfeeding duration. Health professionals must ensure that patient educational materials clearly and unequivocally support breastfeeding as optimal for both mother's and baby's health.

Publications

- Howard FM, Howard CR, Weitzman ML. 1993. The physician as advertiser: The unintentional discouragement of breastfeeding. *Obstetrics and Gynecology* 81:1048–1051.
- Howard CR, Howard FM, Weitzman ML, Lawrence RA. 1994. Antenatal formula advertising: Another potential threat to breastfeeding. *Pediatrics* 94:102–104.
- Howard CR, Howard FM, Weitzman ML. 1994. Infant formula distribution and advertising in pregnancy: A hospital survey. *Birth* 21:14–19.
- Howard CR, Schaffer S, Lawrence RA. 1997. Attitudes, practices and recommendations by obstetricians about infant feeding. *Birth* 24:240–246.
- Howard CR, Howard FM, Lanphear BP, et al. 1999. Early pacifier use: The effects on breastfeeding duration. *Pediatrics* 103:e33.
- Howard CR, Howard FM, Lawrence RA, Weitzman ML. 2000. Office prenatal formula advertising and its effect on breastfeeding patterns. *Obstetrics and Gynecology* 95(2):296–303.

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