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PRAMS Methodology

Data included in this report were collected through the Pregnancy Risk Assessment Monitoring System (PRAMS), a surveillance system established by the Centers for Disease Control and Prevention (CDC) to obtain information about maternal behaviors and experiences that may be associated with adverse pregnancy outcomes.

In Maryland, the collection of PRAMS data is a collaborative effort of the Department of Health and Mental Hygiene and the CDC.

Limitations of Report

The Maryland PRAMS data is retrospective and therefore subject to recall bias. It is also based on the mother's perception of events and may not be completely accurate.

This report presents only basic associations between socio-demographic factors (race/ethnicity, Medicaid status, maternal age,

Each month, a sample of 200 Maryland women who have recently delivered live born infants are surveyed by mail or by telephone, and responses are weighted to make the results representative of all Maryland births.

The results for this report are based on the responses of 6,176 Maryland mothers who delivered live born infants between 1/1/2004 and 12/31/2007 and were surveyed two to nine months after delivery. Response rate for this study period was 71%.

marital status, maternal education), prenatal factors, birth outcomes and breastfeeding rates at the time of delivery and at 10 weeks postpartum.

Unexamined interrelationships among risk factors could explain some of the findings described in this report.

Resources

American Academy of Pediatrics
www.aap.org/healthtopics/breastfeeding.cfm

La Leche League International
www.LLLI.org

Maryland Breastfeeding Coalition, DHMH
www.fha.state.md.us/mch/bf_home.cfm
410-767-6713

National Women's Health Information Center
<http://www.womenshealth.gov/breastfeeding/index.cfm>



Maryland Department of Health and Mental Hygiene
Center for Maternal and Child Health • Vital Statistics Administration

Martin O'Malley, Governor; Anthony G. Brown, Lieutenant Governor; John M. Colmers, Secretary

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Breastfeeding



“Breastfeeding is the ideal way of providing young infants with the nutrients they need for healthy growth and development...”

World Health Organization
2003

Breastfeeding Prevalence

There is little disagreement that breast milk is the best form of nutrition for infants. The U.S. Healthy People (HP) 2010 goals for breastfeeding are an initiation rate of 75%, and continuation rate of 50% at 6 months and 25% at 12 months postpartum.

The Maryland PRAMS survey includes three questions about breastfeeding rates:

- 1) “Did you ever breastfeed or pump breast milk to feed your new baby after delivery?”
- 2) “Are you still breastfeeding or feeding pumped milk to your new baby?”
- 3) “How many weeks or months did you breast-feed or pump milk to feed your baby?”

Mothers who responded “yes” to (1) were considered to have initiated breastfeeding. Mothers who responded “yes” to (2) were considered to have breastfed for at least 10 weeks because mothers may complete the survey anytime between 10 weeks to nine months after delivery, the earliest time being 10 weeks. Responses to (3) that were more than 10 weeks were aggregated in one group.

From 2004-2007, Maryland mothers exceeded the HP 2010 breastfeeding initiation goals, with 78% of mothers reporting they had “ever” breastfed. Breastfeeding initiation was highest among mothers who were Hispanic (94%), Asian (91%), and college graduates (91%). These three groups also had the highest prevalence for breastfeeding more than 10 weeks after delivery. Breastfeeding initiation was lowest among mothers who were less than 20 years old (63%) and unmarried (66%) (Table 1).

More than twice as many teen mothers discontinued breastfeeding (59%) by 10 weeks as mothers ages 30 or more (25%). Only 22% of college graduates discontinued breastfeeding by 10 weeks after delivery.

Table 1. Percentage of Mothers who Initiated Breastfeeding and Continued for at Least 10 Weeks, Maryland 2004-2007

Factors	Percent of Mothers Breastfeeding		
	Initiation	>10 weeks	Change
Total	78	52	-33%
Race/ethnicity			
White, non- Hisp	76	52	-32%
Black, non-Hisp	72	42	-42%
Asian	91	69	-24%
Hispanic	94	68	-27%
Age, years			
Less than 20	63	26	-59%
20-24	70	37	-37%
25-29	79	53	-33%
30 and over	85	64	-25%
Education, highest level			
High school or less	67	36	-46%
Some college	77	46	-40%
College graduate	91	71	-22%
Marital status			
Married	86	63	-27%
Not married	66	33	-50%
Medicaid, at delivery			
Yes	71	41	-42%
No	81	57	-30%
WIC, during pregnancy			
Yes	68	39	-43%
No	84	60	-29%

Maternal Factors

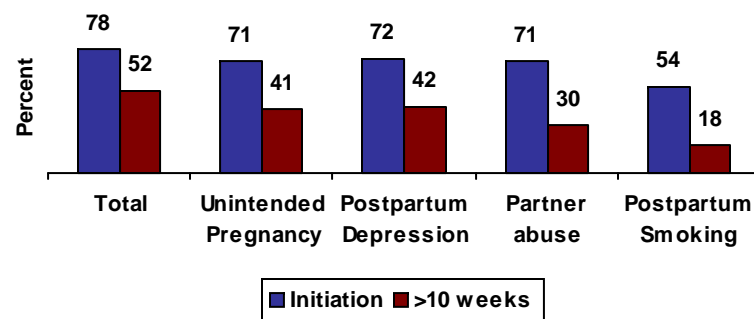
Breastfeeding prevalence was lowest for mothers who smoked postpartum, with 54% reporting that they had initiated breastfeeding and only 18% still breastfeeding their infants at 10 weeks after delivery—a 67% decrease (Figure 1).

Women who smoke may not be aware that cigarette smoking is not a contraindication to breastfeeding even though they should be encouraged to quit or at least not smoke in the home.

Women who reported a history of physical abuse by a former or current intimate partner had similar initiation prevalence (71%) as total but the next lowest breastfeeding prevalence at 10 weeks (30%) —a 59% decrease.

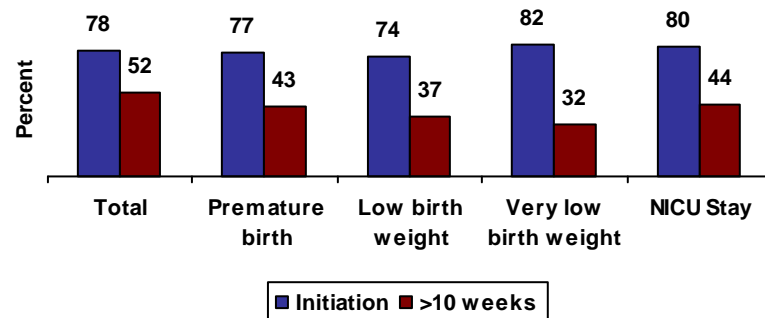
Mothers who reported that their pregnancies were unintended or that they were depressed postpartum also had lower rates of breastfeeding initiation and continuation than the average rate for all Maryland women surveyed.

Figure 1. Breastfeeding Prevalence by Maternal Factors, Maryland 2004-2007



Birth Outcomes

Figure 2. Breastfeeding Prevalence by Infant Factors Maryland, 2004-2007

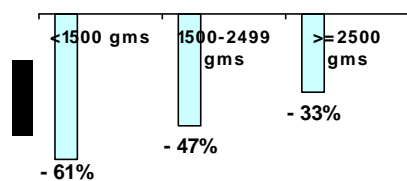


Mothers who delivered infants of low birth weight (<2500 grams), very low birth weight (<1500 grams), premature gestation (<37 weeks), or needing hospitalization in the neonatal intensive care unit (NICU) had similar breastfeeding initiation prevalence (74-82%) near the total average of 78% (Figure 2). However, 10 week continuation prevalence was much lower, especially for very low birth weight (VLBW) infants (32%). Ironically, mothers of VLBW infants had the highest breastfeeding initiation prevalence.

The high prevalence of breastfeeding initiation among VLBW, LBW, and premature infants may, in part, be due to the mothers' increased interactions with NICU staff who can spend more time counseling mothers about the importance of breastfeeding. Mothers with ill infants may also be more motivated to provide their babies with the superior qualities of breast milk.

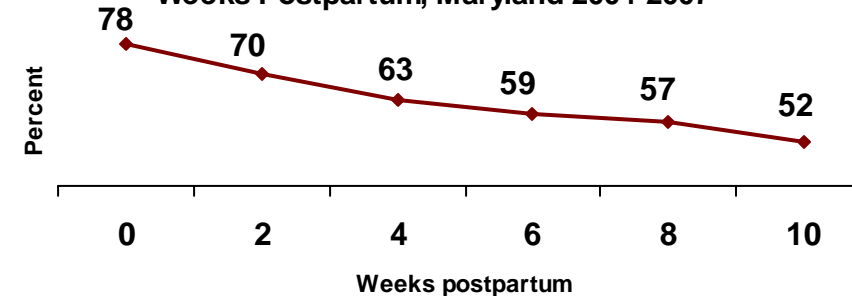
Unfortunately, the Maryland PRAMS survey did not include questions about reasons for discontinuation of breastfeeding. Nearly twice as many mothers of VLBW infants (61%) discontinued breastfeeding at 10 weeks as mothers of normal birth weight infants (33%) (Figure 3).

Figure 3. Percent Change in Breastfeeding Rates from Initiation to >10 Weeks by Infant Birth Weight



Early Postpartum Breastfeeding Discontinuation

Figure 4. Percent of Mothers Breastfeeding by Weeks Postpartum, Maryland 2004-2007



Breastfeeding prevalence decreased steadily during the postpartum period. Approximately 1/3 of the mothers who started breastfeeding were no longer breastfeeding their infants by 10 weeks.

The greatest percentage decrease in breastfeeding (11%) occurred during the first two weeks postpartum (from 78%

to 70% overall), followed by a 10% decrease between weeks 2 and 4 and a 9% decrease between weeks 8 and 10 (Figure 4). PRAMS is unable to track discontinuation rates reliably after 10 weeks postpartum due to the variation in time when mothers complete the survey.

Discussion

The health benefits of breastfeeding for infants are well known, and include reduced childhood rates of ear and respiratory infections, sudden infant death syndrome (SIDS), gastroenteritis, allergies, and diabetes. Less well known but also important are the benefits to mothers from breastfeeding which include decreased postpartum anemia and bleeding as well as a reduced risk of future ovarian and breast cancer.

Although the majority of Maryland mothers initiated breastfeeding (78%), by 10 weeks postpartum only 52% of mothers continued to breastfeed. Breastfeeding was most prevalent among women who were Asian, Hispanic, or college graduates. Initiation was lower among women who were less than 20 years old—only 26% were breastfeeding at 10 weeks after delivery. Continuation at 10 weeks was lowest among women who smoked cigarettes (18%), were victims of partner abuse during pregnancy (30%), or delivered a VLBW infant

(32%). Encouragement and support during the postpartum period may be especially important to help these mothers continue breastfeeding.

The American Academy of Pediatrics and the American College of Obstetricians and Gynecologists recommend exclusive breastfeeding for six months, and breastfeeding with supplemental foods for at least a year after delivery. Using PRAMS data from the first 10 weeks after delivery to project the rate of breastfeeding discontinuation, we can roughly estimate that less than one-third of Maryland mothers will be breastfeeding at 6 months after delivery. This is far short of the HP 2010 goal of 50%.

The creation of a supportive environment in the hospital, home, workplace, and community should be a priority in perinatal health so that mothers and their babies can benefit from the full rewards of breastfeeding.

Comments from PRAMS mothers:

"I am still breastfeeding because of the help I received in the hospital and a few weeks after our discharge."

"I think we need to find a way to make breastfeeding more readily acceptable in the workplace, in society, in general."



"I experienced some difficulties in breastfeeding and didn't know where to get help."

"When you get home it's hard to get support [for breastfeeding] unless you pay for it."