

## Characteristics of Breastfeeding Practices among U.S. Mothers

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### Abstract

**OBJECTIVES:** Although much has been published about breastfeeding rates, little is known about how breastfeeding is practiced in the United States. We describe the distributions and characteristics of practices related to common advice about breastfeeding during the infant's first year of life.

**PARTICIPANTS AND METHODS:** Participants in the 2005/2007 Infant Feeding Practices Study II (IFPS II) received monthly questionnaires during their infants first year. Among breastfeeding respondents, we investigated patterns and trends in types of breastfeeding (supplementing with formula or not; and at the breast or not) as well as maternal report of infant feeding behaviors corresponding to common breastfeeding advice on frequency, duration, and intervals of feedings.

**RESULTS:** More than half of breastfeeding mothers fed their infant nothing other than breast milk until 4 months of age. Formula supplementation declined from 42% at 1 month to 15% at 1 year; adding other foods/liquids increasingly surpassed supplementing with formula beginning at 5 months of age. Six percent of mothers reported that the only breast milk the infant was fed was expressed, rather than at the breast. Frequency of breast milk feedings per day declined from 8 at 1 month to 3.5 at 1 year. Reported feeding duration <20 minutes increased from 46% at 1 month to 88% at 1 year. Feeding from both breasts per feeding decreased 15% over the infant's first year, from 69% to 59%. Longest inter-feeding intervals more than doubled over the year.

**CONCLUSION:** Exclusive breastfeeding was common to 4 but not 6 months of age. Breastfeeding with only expressed milk was rare. Considerable variation exists in maternal report of practices that correspond to common breastfeeding advice. More research is needed to better understand how these variations relate to breastfeeding outcomes and the role of common breastfeeding advice in infant feeding decisions.

### Study population and questions

For this study, we performed all analyses only among the subset of IFPS II respondents who initiated breastfeeding, as determined by a response on the first postnatal questionnaire indicating the infant received any breast milk in the last 7 days (n = 2,587).

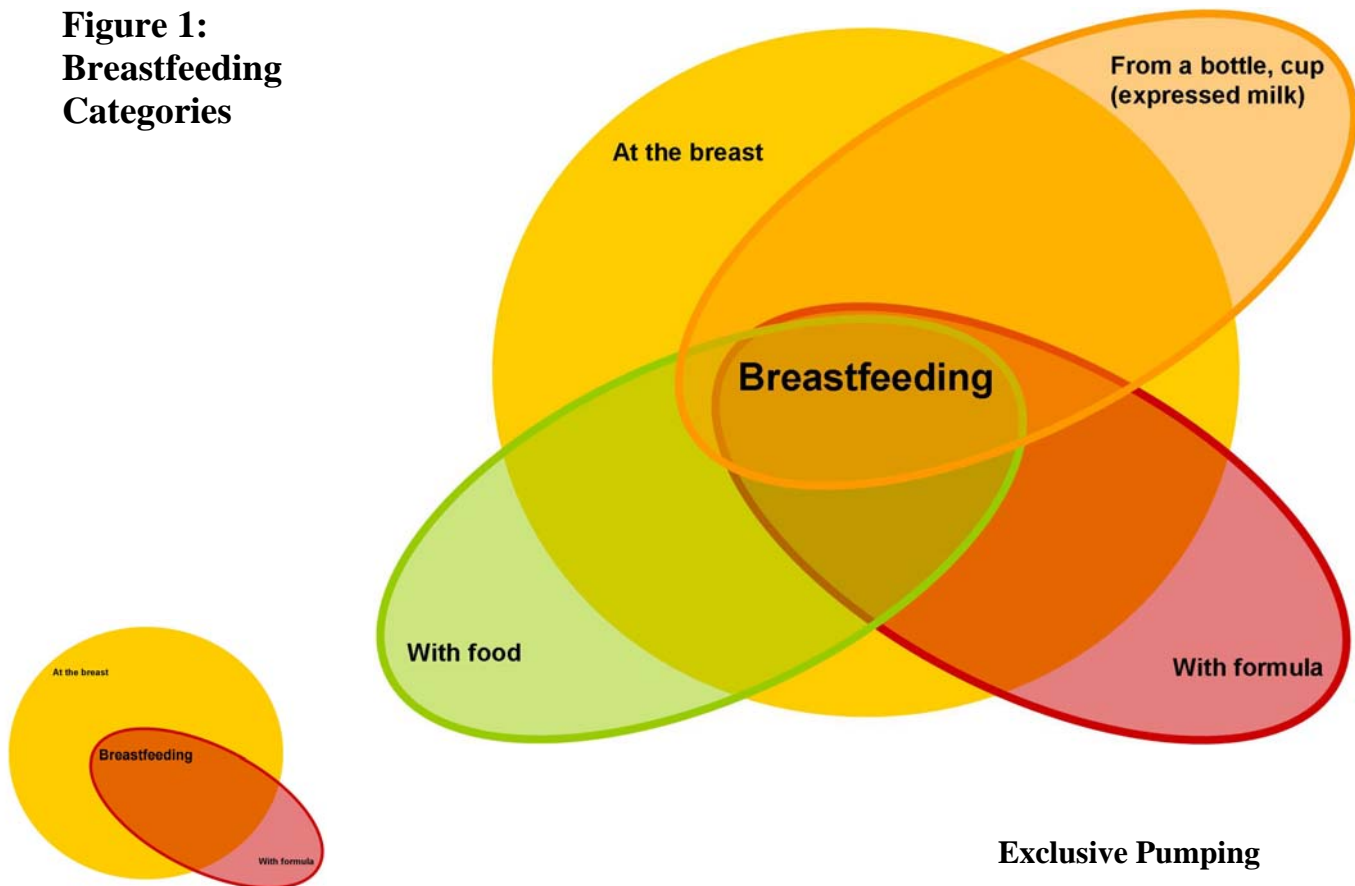
We examined 4 questionnaire items corresponding to topics of common anticipatory breastfeeding advice:

- 1) "In the past 7 days, how often was your baby fed [breast milk]?"
- 2) "In an average 24-hour period, what is the longest time for you, the mother, between breastfeedings or expressing milk?"
- 3) "About how long does an average breastfeeding last?"
- 4) "Does your baby usually feed from both breasts at each feeding?"\*

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\* The response categories for the questionnaire item about feeding from both or one breast at each feeding (known as paired or unpaired feedings<sup>23</sup>) were "yes," "no," and "Baby was only fed pumped milk." Our analysis of paired feedings was only among those who responded "yes" or "no," while the mothers who responded "Baby is only fed pumped milk" provided information about the prevalence of exclusive pumping.

**Figure 1:  
Breastfeeding  
Categories**



**Breastfeeding and Infant Formula**

Throughout the year, supplementing breastfeeding with infant formula was less common than breastfeeding without infant formula, regardless of other foods or liquids consumed.

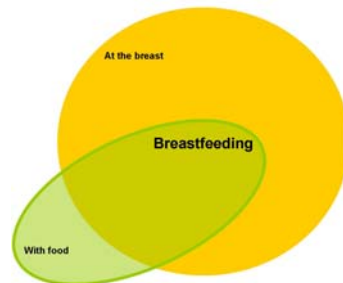
For the first 3 months, exclusive breastfeeding was the most prevalent type of breastfeeding; more mothers reported exclusive breastfeeding at 3 months than any other time point.

After 3 months, exclusive breastfeeding declined steeply.

Slightly >1/3 of breastfeeding mothers supplemented with infant formula from 3 to 7.5 months.

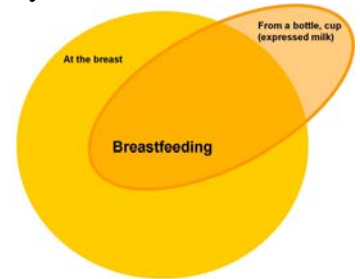
**Breastfeeding and Foods/Liquids**

By 5 months, prevalence of breastfeeding without infant formula, but with other foods or liquids, surpassed that of supplementing with infant formula and continued to increase throughout the rest of the year.



**Exclusive Pumping**

Among all mothers who were breastfeeding during the IFPS II, exclusive pumping was reported by 5.6% of mothers, meaning that their infants never fed directly at the breast.



Breastfeeding durations among this group were short.

Only 1/3 of exclusively pumping mothers had durations of any breastfeeding beyond one month.

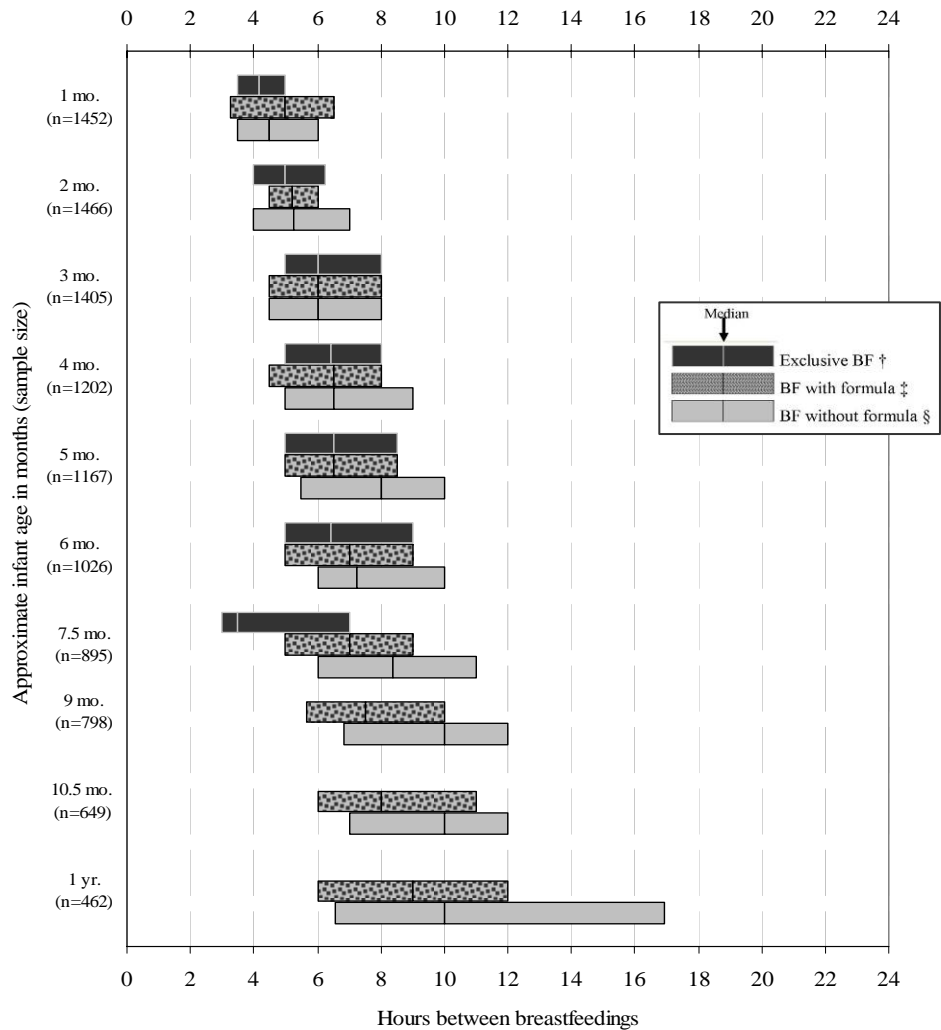
### Example Breastfeeding Patterns

The longest interval between breastfeeding occasions more than doubled over the questionnaire period (Figure 2).

Paired *t* tests comparing the mean longest reported feeding intervals by breastfeeding type at each infant age indicated the following:

- 1) differences among mothers who did and did not supplement breastfeeding with infant formula were statistically significant at  $P < .005$  for every time point except at 12 months; and
- 2) differences among mothers who did and did not practice exclusive breastfeeding were significant at  $P < .005$  for the first 5 months.

**Figure 2:**  
**Interquartile ranges of longest inter-feeding intervals\* by breastfeeding type and infant age.**



\*As indicated by responses to questionnaire item: "In an average 24-hour period, what is the longest time for you, the mother, between breastfeedings or expressing milk?"  
 † Exclusive BF—the infant consumes only breast milk, and absolutely no other foods or liquids.  
 ‡ BF with formula—the infant consumes breast milk, other foods and liquids, and infant formula.  
 § BF without formula—the infant consumes breast milk and other foods and liquids, but not infant formula.

The average reported length of individual breastfeeding sessions decreased over the year. In the first month, approximately half of respondents estimated that feedings typically lasted <20 minutes. The prevalence of feedings of this duration increased throughout the year.

At 1 year, almost all mothers estimated feeding durations of <20 minutes. Short feedings (<10 minutes) were rare in the first month. However, at 1 year, 40% reported average feedings of <10 minutes. Feedings lasting ≥40 minutes were rare across all infant age categories.

## Discussion

In this study, we noted wide variation in mothers' reports of the number of daily feedings, length of feedings and time between feedings. It is not yet clear when divergences from common advice represent normal variation in practice or real breastfeeding problems. Similarly, a better understanding is needed of how adherence to common advice is actually related to effective breastfeeding. Ultimately, given the widespread use of this kind of common breastfeeding advice, it would be extremely valuable to examine in greater detail how this kind of advice is perceived by mothers and affects their breastfeeding experience and outcomes.

## Food for Thought

Parents place great trust in and seek out the expertise of health professionals on issues related to infant feeding; however, they may not always receive the kind of information they need.

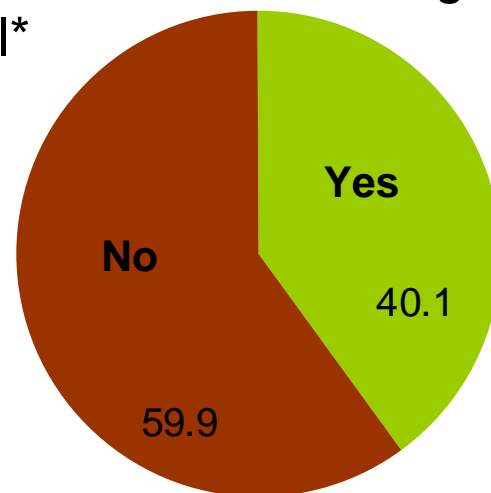
Effective lactation is not determined by the frequency, duration, intervals, and pairing of feedings. Instead, it is influenced by interactions among 4 major elements:

- 1) characteristics of how mothers' bodies make and store milk that vary by time of day;
- 2) how completely the child empties the breast at an individual feeding;
- 3) variations across 24 hours in the child's need for breastfeedings; and
- 4) which breast the child feeds from first—the breast that is the dominant or non-dominant milk producing breast.

Mothers who stop breastfeeding because of concern that their breastfeeding practice does not follow the pattern of common advice may not cite deviation from the advice as a reason for early weaning; therefore, health care professionals may not be able to address the mother's specific concerns or problem the mother has. Mothers more typically cite reasons that fall into a broader category, such as insufficient milk supply.

Health professionals who have a deeper understanding of the long-term logistics of breastfeeding management beyond a simple set of common instructions can then help mothers make better informed infant feeding decisions and help mothers meet their own breastfeeding goals.

## Percent of women who met their own breastfeeding goal\*



\*Self-reported answer of "yes" to the question: *"Did you breastfeed as long as you wanted to?"*

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last updated 2/2009