

## Redefining “Breastfeeding” Initiation and Duration in the Age of Breastmilk Pumping

Sheela R. Geraghty<sup>1</sup> and Kathleen M. Rasmussen<sup>2</sup>

*Dear Editor:*

Breastfeeding rates have been chronicled in the United States throughout the past 50 years. The general purpose of these descriptive data collections has been to provide public health surveillance of infant feeding. The results have been used to identify demographic characteristics and the geographic locations of women who may need breastfeeding support and assistance. These statistics have helped create policy, set goals for the country, and provide benchmark measures from which to increase the proportion of children receiving breastmilk.

Although investigators have used distinct methods of data collection in past studies, the definition of how “breastfeeding” was characterized has been relatively constant. If an infant was fed breastmilk even once, the mother was said to have initiated breastfeeding. For the period that a child was fed breastmilk, the mother was considered to be concurrently providing that breastmilk. If a child was fed breastmilk exclusively, predominantly, or nominally at any time, then the mother was categorized, respectively, as exclusively, predominantly, or nominally “breastfeeding” for that same period. The collection of breastfeeding statistics has always assumed the behavior between the mother and child to be a synchronized, simultaneous event, with both participating equally.

This presumption in “breastfeeding” data collection is no longer uniformly true for mothers and their children in the United States, however. Approximately 70% of American women initiate breastmilk feeding in the postpartum period,<sup>1</sup> while approximately 70% of women with children under the age of 18 years work outside the home.<sup>2</sup> If women are going to maintain their milk supply when separated from their infant, they must extract their milk regularly. Thus, in addition to feeding their children directly “at the breast,” women in the United States now commonly extract milk from their breasts by mechanical means. A woman with a double-sided electric breast pump can easily and painlessly extract the contents of both breasts in a short period. This pumped milk may be fed to the infant immediately, left at ambient temperature, or stored in the mother’s own refrigerator or freezer for variable lengths of time. In the Infant Feeding Practices Study II, the largest study on pumping by American mothers, 85% of 1,564 breastfeeding mothers of healthy, singleton infants 1.5–4.5 months old expressed milk from their breasts.<sup>3</sup> Among the

1,493 of these mothers with complete data, only 32% had not expressed milk in the previous 2-week period, 43% had expressed milk occasionally, and 25% expressed milk on a regular schedule. Among the 820 mothers who continued to breastfeed through 7 months postpartum, 92% had expressed breastmilk at some time.<sup>3</sup>

The behavior of pumping clearly raises the question: What is “breastfeeding?” Is a child fed at the mother’s breast and also fed bottled pumped milk by another caregiver “exclusively” breastfed? Is a premature infant fed a combination of his or her mother’s own pumped breast milk and donor human milk also “exclusively” breastfed? Is a mother pumping two or three times a day while at work and feeding her baby at the breast when she gets home “exclusively” breastfeeding? What if a mother stops lactating completely, and the child continues to receive her stored milk until the supply is gone for a period that could be weeks? Traditional definitions of breastfeeding classify a mother as still “breastfeeding” for the duration that her child is receiving breastmilk regardless of whether she has ceased lactating.

We suggest that descriptive studies of breastmilk feeding rates now include questions that (1) separate the mother’s breastmilk extraction from the child’s breastmilk consumption, (2) distinguish between breastmilk fed at the breast or hand-expressed/pumped, and (3) establish the time when breastmilk substitutes are introduced (Table 1). Along with these categories of breastmilk feeding initiation and cessation, there also should be a way to note the time period of feeding “another mother’s milk” as may occur in the cases of donor milk or milk sharing.

The reason that it is important to distinguish between feeding directly at the breast and feeding pumped milk because these behaviors may have different effects on the health of mothers and children. The seminal studies that established the benefits of “breastfeeding” compared outcomes for children who were fed breastmilk directly at the breast with those who were fed a breastmilk substitute from a bottle or cup. Pumping, however, creates the combination of these two once-distinct feeding behaviors: the mother’s breastmilk is now in a bottle or cup. There is much that we do not know about how at-the-breast feeding compares with pumped-milk feeding. Using more detailed questions, such as those suggested here, will still permit the use of current designations of “breastfeeding”: ever breastfed or fed breastmilk, age of child

<sup>1</sup>Center for Breastfeeding Medicine, Cincinnati Children’s Hospital Medical Center, Cincinnati, Ohio.

<sup>2</sup>Division of Nutritional Sciences, Cornell University, Ithaca, New York.

TABLE 1. SUGGESTED QUESTIONS TO MORE ACCURATELY DEFINE BREASTMILK FEEDING INITIATION AND CESSATION

<i>Action</i>	<i>Day of life/day postpartum of</i>		
	<i>Initiation of feeding options</i>	<i>Cessation of feeding options</i>	
	<i>At breast</i>	<i>Hand-expressed/pumped</i>	
Breastmilk extraction by mother	How many days old was [child's name] when [mother's name] first fed him/her directly at the breast?	On what postpartum day did [mother's name] first begin to hand-express or pump her milk?	On what postpartum day did [mother's name] stop expressing or pumping milk from her breasts?
Breastmilk consumption by child	How many days old was [child's name] when he/she was first fed any of (his/her) mother's hand-expressed or pumped breastmilk?	How many days old was [child's name] when [mother's name] stopped feeding him/her directly at the breast?	How many days old was [child's name] when he/she was no longer fed any of (his/her) mother's expressed or pumped breastmilk?
	<i>Another mother's milk</i>	<i>Juice/water</i>	<i>Formula</i>
Breastmilk substitute consumption by child	How many days old was [child's name] when (he/she) was first fed another mother's breastmilk?	How many days old was [child's name] when (he/she) was first fed anything other than breastmilk or formula (i.e., juice water)?	NA

NA, not applicable.

when no longer fed breastmilk, age of child when fed formula, and age of child when fed any other food. Further delineation of these descriptive statistics, however, will lead to a more accurate representation of this complicated behavior and, thus, to more clinically relevant results to important research questions.

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Address correspondence to:  
Sheela R. Geraghty, M.D., M.S., FABM  
Center for Breastfeeding Medicine  
Cincinnati Children's Hospital Medical Center  
3333 Burnet Avenue  
MLC 7035, Location S, 9-242  
Cincinnati, OH 45229

E-mail: sheela.geraghty@cchmc.org

