



## Administration/Practice Management, Breastfeeding, Nutrition, Quality Improvement

### Measuring Breastfeeding Success

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In a recently released issue of *Pediatrics* ( [10.1542/peds.2017-0142](https://doi.org/10.1542/peds.2017-0142)), Dr. Trang Nguyen and colleagues look at a very interesting and clinically important question: what is the prevalence of formula supplementation among breastfed infants in maternity hospitals, and what factors impact this? The authors focus on their home state of New York (NY) because NY has the second highest rate of formula supplementation (26.1%) in the US, which is meaningfully higher than the national average (17.1%), and almost double the Healthy People 2020 Maternal, Infant and Child Health goal of 14.2% (<<https://www.healthypeople.gov/2020/topics-objectives/topic/maternal-infant-and-child-health/objectives>>). Solid evidence supports the urgency of reducing in-hospital not medically indicated formula supplementation of breastfed infants: although previously viewed as a benign practice that "helped" mothers, we now know that the impact of this practice is measurably negative. Chantry and colleagues demonstrated that among first time mothers who intended to breastfeed, those whose infants received formula in the hospital were 1.8 times less likely to be exclusively breastfeeding by 60 days postpartum and were 2.7 times more likely to have stopped breastfeeding than those whose infants were not supplemented. <sup>1</sup> Nguyen et al used 2014 enhanced birth certificate data for all eligible infants from the 126 birthing hospitals in NY (n=160,911 infants); a major strength of this study is the completeness and size of their sample. They found that observed formula supplementation rates varied widely across NY, and their analytical approach, which adjusts for confounding factors, is clear, well explained and easy to read.

A couple of points bear comment. Although we can and should consider enhanced birth certificate data to be as close an approximation to "the truth" as we have, challenges to data collection and accuracy are also important to consider. I am not suggesting that these issues invalidate the results of Dr. Nguyen and colleagues' excellent work, but rather that being well informed about data collection difficulties is good background. States including NY and my home state of Ohio (OH) have struggled both to collect accurate data on exclusive breastfeeding (and supplementation) and to improve maternity care practices. In 2008, NY reported a range of 0-99% for supplementation of breastfed infants among all NY hospitals (excluding NY City); it is unlikely that this data fully and accurately represented practice, and multiple initiatives to improve practice and data collection were begun.<sup>2</sup> In Ohio (OH), until 2014, information at the state level on the virtual birth certificate (IPHis- integrated perinatal health information system) was not collected separately regarding exclusive breastfeeding and formula supplementation of breastfed infants- only lumped data on "any breastfeeding" was gathered. Trainings by the Ohio Perinatal Quality Collaborative at the level of individual hospitals and data collectors were conducted over a period of a year, and additional web-based and reminder trainings are ongoing (<<https://opqc.net/announcements/04042016/new-iphis-training-dates>>). To complicate matters further (and after the data for Nguyen et al's study was collected) the Joint Commission retired Perinatal Core Measure PC-05a and replaced it with PC-05: this meant that the mother's preference to not breastfeed was no longer recorded, and maternal exclusions were discontinued (<<https://manual.jointcommission.org/releases/TJC2015B/MIF0170.html>>). This change led to another round of



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trainings for those tasked with collecting the actual chart data, and IPHIS data accuracy and completeness were again at some risk.

A final point to consider: while Nguyen et al did not find that Baby-Friendly Hospital designation ensured low rates of formula supplementation, this should not be discouraging or considered a lack of endorsement of Baby-Friendly designation. Another recently released article in *Pediatrics* by Dr. Lori Feldman-Winter and colleagues (10.1542/peds.2016-3121) describes the Best Fed Beginnings program, a quality improvement initiative which supported Baby-Friendly designation of more than 70 participating hospitals. Selection for participation was based upon "low breastfeeding rates...sociodemographics of the population served, geographic locations (with preference for regions with low breastfeeding rates)..." in addition to hospital readiness factors. Thus for hospitals participating in this type of major initiative, even huge improvements in their individual rates of exclusive breastfeeding may not translate directly into the highest breastfeeding or lowest supplementation rates in comparison to birthing hospitals in the same state with more favorable demographics.

All in all, I find this subject fascinating, and hope I have been able to share a bit of my enthusiasm for the facts and figures and measurement of breastfeeding rates and promotion efforts with you!

### References

1. Chantray CJ, Dewey KG, Peerson JM, Wagner EA, Nommsen-Rivers LA. In-hospital formula use increases early breastfeeding cessation among first-time mothers intending to exclusively breastfeed. *J Pediatr*. 2014 Jun; 164(6):1339-45.e5.
2. DNPAO State Program Highlights Maternity Care Practices. Centers for Disease Control and Prevention. <[https://www.cdc.gov/obesity/downloads/CDC\\_MaternityCarePractices.pdf](https://www.cdc.gov/obesity/downloads/CDC_MaternityCarePractices.pdf) > Accessed 6/13/2017.

- [Widespread Hospital Variation in Supplementation of Breastfed Newborns](#)
- [The Breastfeeding-Friendly Pediatric Office Practice](#)
- [Neurodevelopment: The Impact of Nutrition and Inflammation During Preconception and Pregnancy in Low-Resource Settings](#)
- [Donor Human Milk for the High-Risk Infant: Preparation, Safety, and Usage Options in the United States](#)
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