






**State of the State: Breastfeeding & Preterm Infants**

**Becoming Baby-Friendly in Oklahoma Summit 2023**  
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 Director, Oklahoma Breastfeeding Resource Center


<b>Approval Statement</b>	<i>Oklahoma Nurses Association is approved as a provider of nursing continuing professional development by the Midwest Multistate Division, an accredited approver by the American Nurses Credentialing Center's Commission on Accreditation.</i>
<b>Criteria for Successful Completion</b>	<i>Participant must attend entire conference and complete evaluation.</i>
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THANK YOU TO OKLAHOMA STATE DEPARTMENT OF HEALTH!




BBFOK Summit funded by Title V federal maternal/child health funds

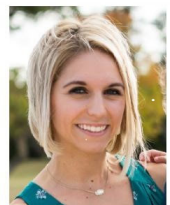
The OBRC Team




Our Team




Becky Mannel, MPH, IBCLC, FILCA



Jaclyn Huxford, IBCLC



Amanda Parsons, MA, RDN/LD, IBCLC



Sara Bellatti, MS

### Oklahoma Breastfeeding Rates Babies Born in 2019

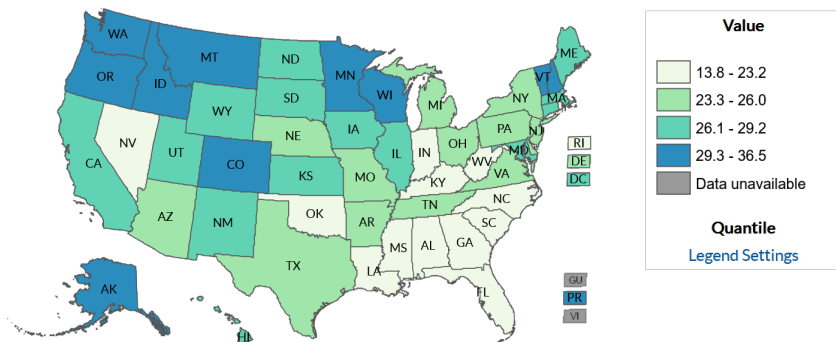
2022 (CDC)	National	Oklahoma	Ranking (out of 50)
Ever breastfed	83.2%	77.3%	44th
Any Bfdg at 6 months	55.8%	47.9%	45th
Any Bfdg at 12 months	35.9%	27.9%	45th
EBF at 3 months	45.3%	43.1%	33rd
EBF at 6 months	24.9%	23.2%	40th

### Breastfeeding Initiation in Oklahoma, 2022

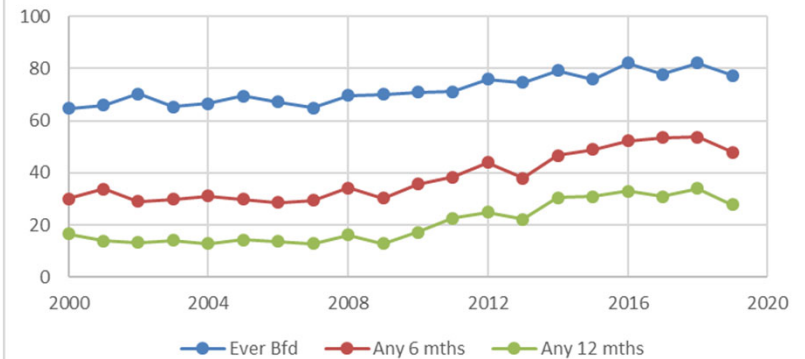
Oklahoma State Department of Health

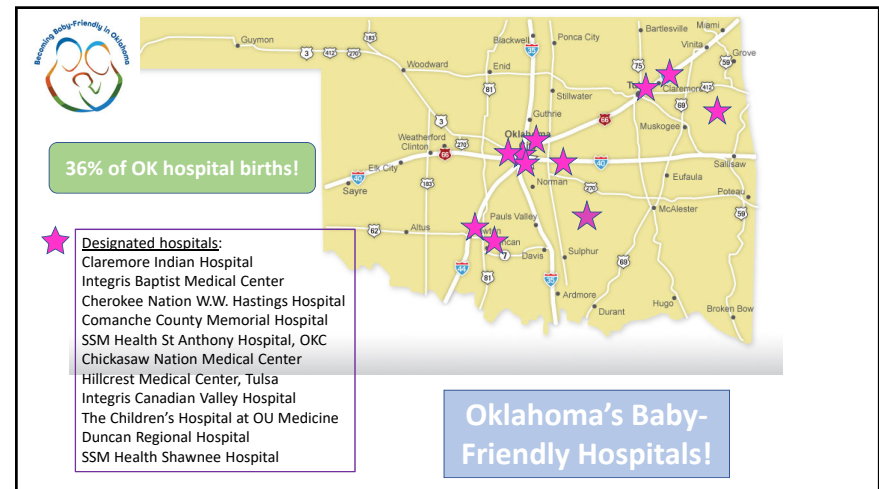
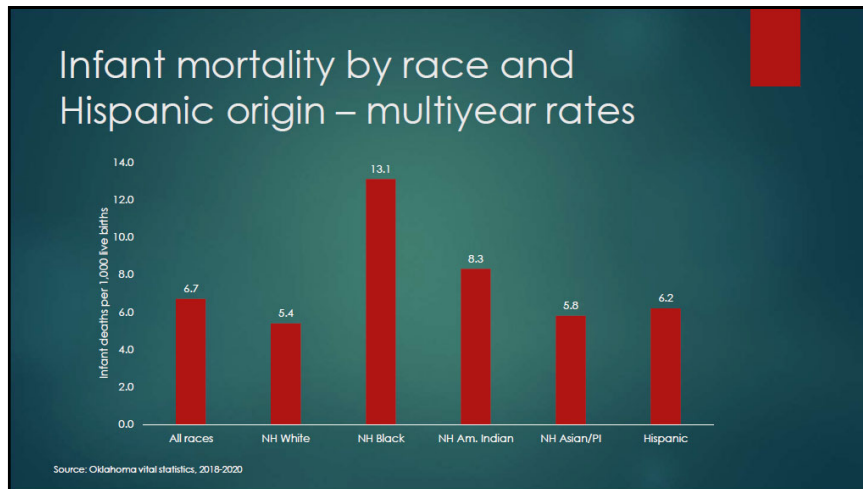
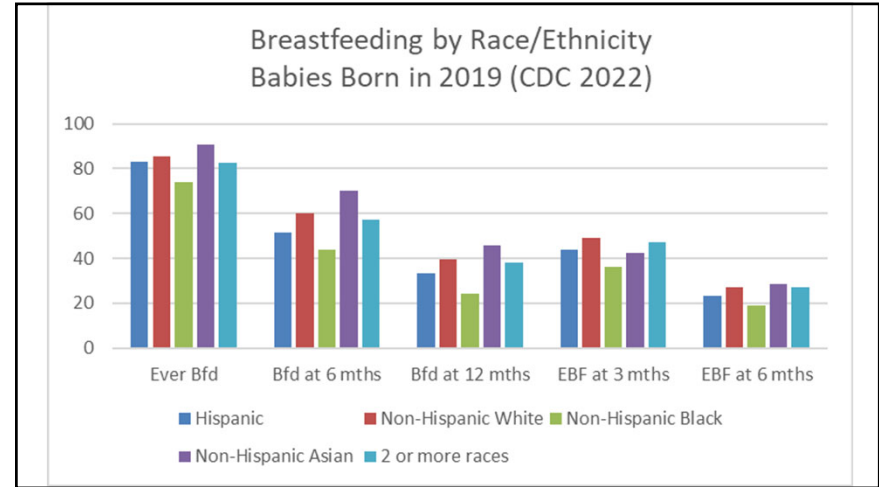
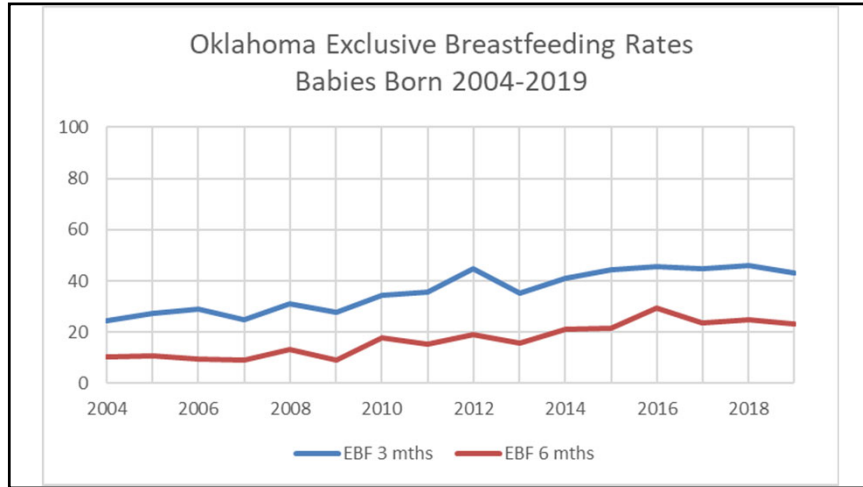
Oklahoma	2022
Births	47,988
Birthing Hospitals	44
Breastfeeding Initiation Rate	84.5%

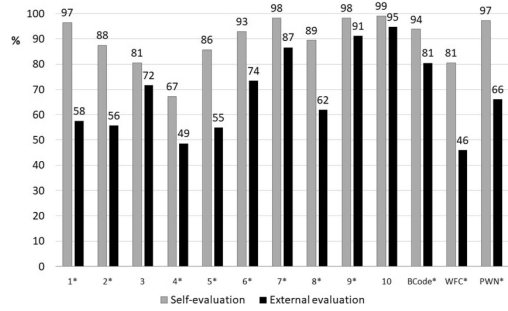
### Percent of Infants EBF through 6 months Born in 2019, CDC



### Oklahoma Any Breastfeeding Rates Babies Born 2000-2019, CDC







**Fig. 4** Comparison of compliance with BFHI criteria by self-monitoring and external evaluation. Brazil 2015. Legend: Comparison of compliance with the Ten Steps and other criteria by Baby-Friendly Hospitals that carried out self-monitoring and external evaluation in 2015. Brazil (n = 113). Footnote: 1–10 = Ten Steps to Successful Breastfeeding; BCode = Brazilian Code of Marketing of Breastmilk Substitutes; WFC = Woman-Friendly Care; PWN = Father or mother stay with the Newborn; \* Criteria that had a significant difference (Mc Nemar test p - value < 0.05) between self and external evaluations

Araujo et al, 2019. External evaluation and self monitoring of the Baby-friendly Hospital Initiative's maternity hospitals in Brazil. Int Breastfeed J.

Does current Baby-Friendly designation impact NICU/preterm babies?

**YES!**

**STEP 5:**  
Support mothers to initiate and maintain breastfeeding manage common difficulties.



### STEP 5 DETAILS R/T PRETERM INFANTS

STANDARD 5.6:

**Mothers of preterm or sick infants report having been helped to express milk within 1–2 hours after birth.**

COMPETENCY ASSESSMENT

Health professionals will be competent in:

- *Helping a mother breastfeed a late preterm infant*
- *Helping a mother manage milk expression*

OBRC

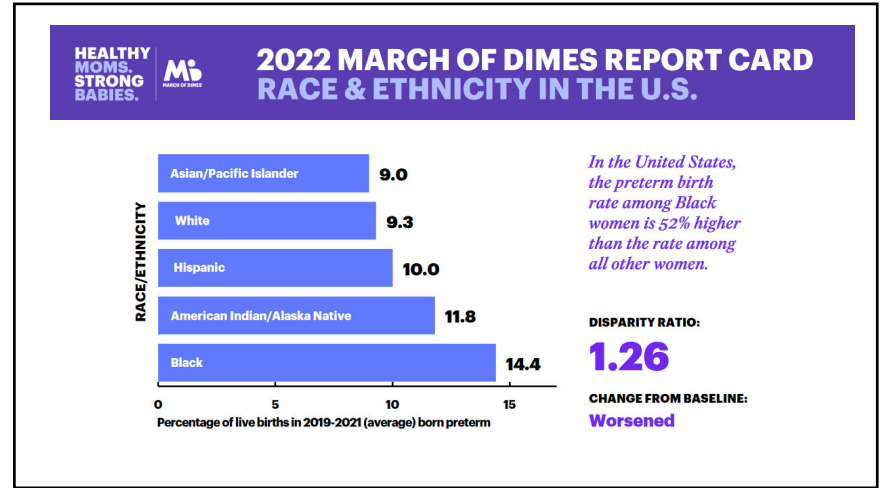
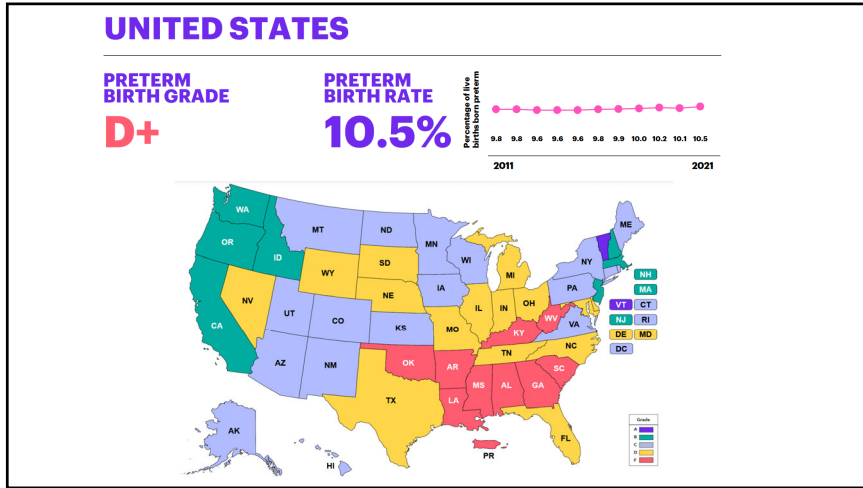


### NEONATAL INTENSIVE CARE (NICU) RESOURCES:

*A Guide to Recommended Practices*

2021





### Oklahoma Preterm Births in 2022

Gestational Age	Births	%
Preterm (20-36 weeks)	5384	11.2%
Early Term/ Late Preterm (37-38 weeks)	15184	31.6%
Term (39-42 weeks)	27349	56.9%
Post Term (>42 weeks)	124	0.3%
Missing	62	0.1%

<https://neonatalogysolutions.com/oklahoma-nicus/>

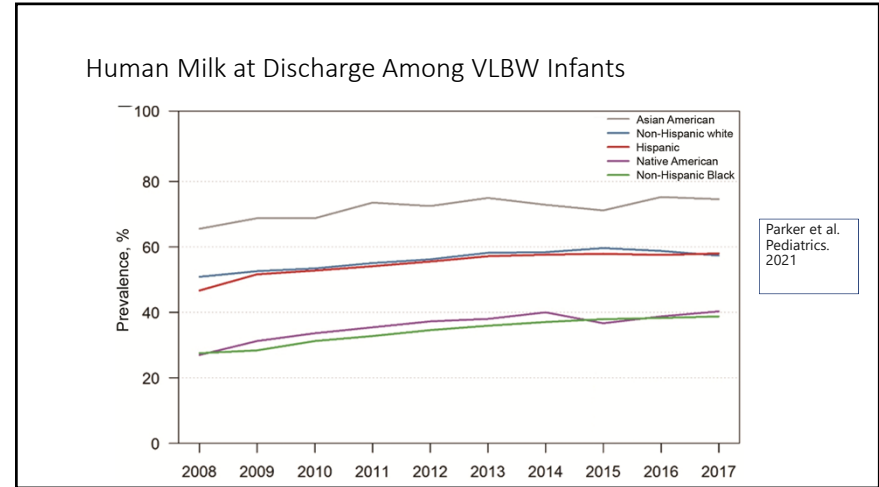
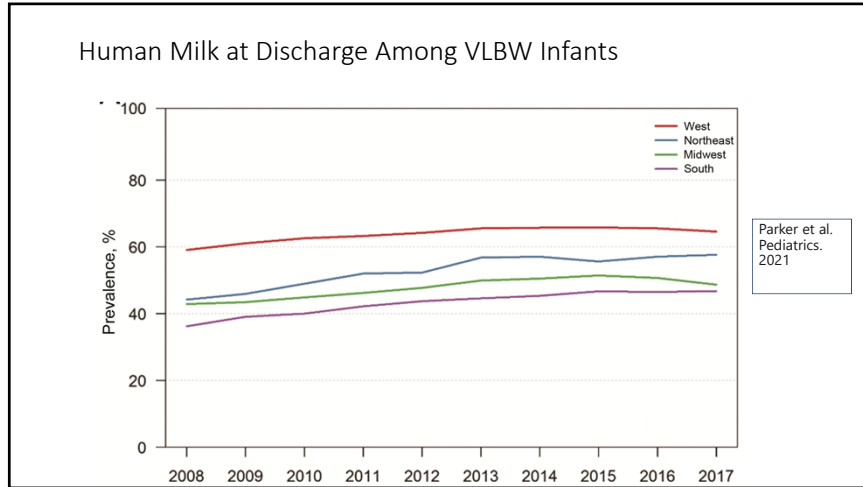
### Oklahoma

Level	Count
Level IV	2
Level III	5
Level II	8

Neonatology Groups: 1  
Neonatal-Perinatal Fellowship Programs: 1  
Vermont Oxford Members: 5

Job Postings = **0 positions**

Skip To: Fellowship Programs | Job Postings | Upcoming Conferences | VON Members | Helpful Resources



### Comparison of Breastfeeding Practices Among Mothers with Term and Preterm Births

Kunzel, Betha, MS<sup>1</sup>, Maxwell, Rebecca, MPH, BS, CG, FLS, CA<sup>1</sup>, Bacon, Nancy, MS, RD, MD, CDCES<sup>1</sup>  
<sup>1</sup>Oklahoma State Department of Health, <sup>2</sup>University of Oklahoma Health Center

#### BACKGROUND

Preterm birth (<37 weeks) is one of the primary causes of infant mortality and represents over 10% of Oklahoma births. Breastfeeding reduces the risk of many acute and chronic diseases for both term (>37 weeks) and preterm babies, including diabetes, obesity, childhood cancers and numerous infections. Infants born preterm are particularly susceptible to necrotizing enterocolitis, sepsis, retinopathy of prematurity and bronchopulmonary dysplasia, all of which have reduced incidence when these babies are fed human milk.<sup>1</sup>

In Oklahoma, the Preparing for a Lifetime initiative has focused on improving breastfeeding rates to reduce infant mortality in the state.

#### STUDY QUESTION

Examine and compare the prevalence of breastfeeding initiation and duration among mothers who gave birth term or preterm. Investigate disparities in breastfeeding rates by the mother's age, race and Hispanic origin.

#### METHODS

Oklahoma Pregnancy Risk Assessment Monitoring System (PRAMS) data from 2016–2019 were used (n=6,182). Descriptive statistics and logistic regression models were used to investigate associations at a significance level of  $p < 0.05$ .

Gestational age at delivery was obtained from the birth certificate. Low births with gestational ages less than 37 weeks were considered preterm and those 37 weeks or above were considered term births.

#### RESULTS

**Figure 1. Mothers with preterm births had lower rates of breastfeeding duration**

88.4% (n=5434) initiated breastfeeding. 57.6% (n=3611) breastfed to 8 weeks or more.

89.8% (n=5434) births were term. 10.2% (n=681) were preterm births and 89.8% (n=5434) births were term.

\*\* Differences in rates were statistically significant at  $p < 0.05$  in this study, 10.2% (n=681) were preterm births and 89.8% (n=5434) births were term.

88.3% of preterm mothers and 89.5% of term mothers initiated breastfeeding. Approximately 50% of the preterm mothers were breastfeeding at 8 weeks or more (Figure 1).

**Figure 2. Breastfeeding among very preterm mothers dropped from 95.6% at birth to 43.0% at 8 weeks**

95.6% (n=20) initiated breastfeeding. 43.0% (n=10) breastfed to 8 weeks or more.

92.9% (n=36) initiated breastfeeding. 52.0% (n=19) breastfed to 8 weeks or more.

There was a significant drop in breastfeeding from birth to 8 weeks, most notably among very preterm mothers ( $p < 0.05$ ) (Figure 2).

#### RESULTS

Teen preterm mothers initiated breastfeeding of higher rates than older preterm mothers, however these mothers had the largest drop with only 45.9% still breastfeeding at 8 weeks ( $p < 0.05$ ) (Figure 3). The average duration of any breastfeeding for preterm mothers less than 20 years, 20–29 years, and 30 years and over was 8.6 weeks, 9.6 weeks, and 10.1 weeks, respectively.

**Figure 3. Teen preterm mothers had the most significant drop in breastfeeding from initiation to 8 weeks.**

85.4% (n=23) initiated breastfeeding. 47.6% (n=13) breastfed to 8 weeks or more.

88.1% (n=24) initiated breastfeeding. 52.1% (n=15) breastfed to 8 weeks or more.

86.5% (n=24) initiated breastfeeding. 47.6% (n=13) breastfed to 8 weeks or more.

**Figure 4. Non-Hispanic American Indian preterm mothers had the lowest breastfeeding rates**

Hispanic: 83.1% initiated, 48.9% at 8 weeks or more.  
 Non-Hispanic: 87.9% initiated, 50.9% at 8 weeks or more.  
 Non-Hispanic American Indian: 67.6% initiated, 33.0% at 8 weeks or more.  
 Non-Hispanic Black: 81.2% initiated, 47.7% at 8 weeks or more.  
 Non-Hispanic White: 87.2% initiated, 50.7% at 8 weeks or more.

#### RESULTS

Characteristic	Adjusted Odds Ratio**	95% Confidence Interval
Breastfeeding initiation		
Preterm birth (<37 weeks)	1.0	0.7–1.5
Breastfeeding to 8 weeks or more		
Preterm birth (<37 weeks)	0.7	0.5–0.9

\*\*Adjusted for maternal age, race and Hispanic origin, education, and income. †Reference group is term births (>37 weeks).

When controlling for age, education, income, and race and Hispanic origin, preterm mothers were as likely as term mothers to initiate breastfeeding and 30% less likely to breastfeed to 8 weeks or more (Table 1).

#### CONCLUSIONS AND IMPLICATIONS

Mothers with very preterm to moderate preterm births initiated breastfeeding at higher rates than mothers with late preterm births, but stopped breastfeeding by around 8 weeks at much higher rates than mothers with late preterm births.

Non-Hispanic American Indian, non-Hispanic Black mothers and older mothers in general have lower rates of breastfeeding duration.

Stress and the mother-infant separation are unique challenges faced by preterm mothers. Factors that influence breastfeeding duration in the hospital and after discharge for preterm mothers need to be identified and addressed to improve breastfeeding rates and ultimately long-term health outcomes for these vulnerable babies.

Note: In this study breastfeeding prevalence was defined as initiating breastfeeding and mothers still breastfeeding with a preterm mother.

References: 1. World Health Organization. *World Breastfeeding Trends: Where We Start, How Long We Stay, and How Well We Do*. Geneva, 2016. <http://www.who.int/publications/m/item/world-breastfeeding-trends>

### Comparison of Breastfeeding Practices Among Mothers with Term and Preterm Births Oklahoma PRAMS data, 2016-2019

**Figure 1. Mothers with preterm births had lower rates of breastfeeding duration**

86.4% (n=5434) initiated breastfeeding. 57.6% (n=3611) breastfed to 8 weeks or more.

86.5% (n=5434) initiated breastfeeding. 58.5% (n=3611) breastfed to 8 weeks or more.

86.3% (n=5434) initiated breastfeeding. 50.1% (n=3611) breastfed to 8 weeks or more.

Legend: Overall (black), Term (blue), Preterm (grey)

\*\* Differences in rates were statistically significant at  $p < 0.05$  in this study, 10.2% (n=681) were preterm births and 89.8% (n=5494) births were term.

**Figure 2. Breastfeeding among very preterm mothers dropped from 95.6% at birth to 43.0% at 8 weeks**

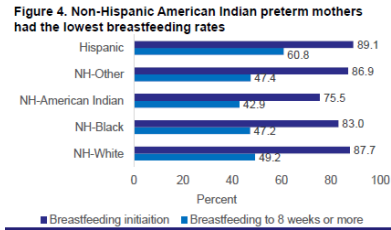
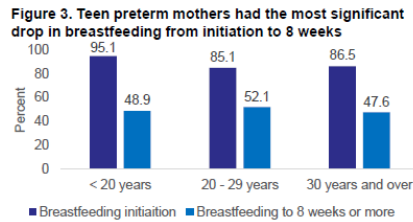
95.6% (n=20) initiated breastfeeding. 43.0% (n=10) breastfed to 8 weeks or more.

92.9% (n=36) initiated breastfeeding. 52.0% (n=19) breastfed to 8 weeks or more.

Legend: Very preterm (20-31 weeks) (black), Moderate preterm (32-34 weeks) (blue), BF - Breastfeeding (grey)

There was a significant drop in breastfeeding from birth to 8 weeks, most notably among very preterm mothers ( $p < 0.05$ ) (Figure 2).

### Comparison of Breastfeeding Practices Among Mothers with Term and Preterm Births Oklahoma PRAMs data, 2016-2019



### Comparison of Breastfeeding Practices Among Mothers with Term and Preterm Births Oklahoma PRAMs data, 2016-2019

Preterm Mother Age	Average Weeks of Breastfeeding Duration
<20 year	8.8
20-29 years	9.6
30 years or more	10.1

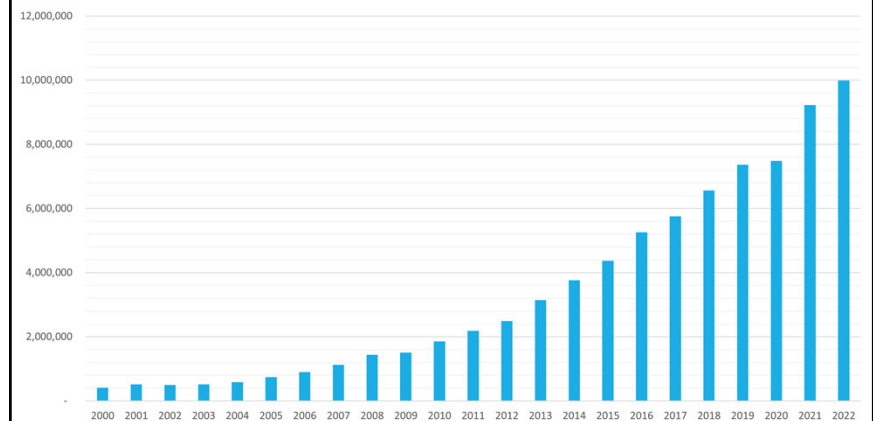
**CONCLUSION:**  
Factors that influence breastfeeding duration in the hospital and after discharge for preterm mothers need to be identified and addressed to improve breastfeeding rates and ultimately long-term health outcomes for these vulnerable babies.

1985



*Mobilizing the Healing Power of Donor Milk*

### Total Ounces Distributed





OKLAHOMA  
mothers' milk bank



Let's move during a pandemic and nationwide formula shortage!




OKLAHOMA  
mothers' milk bank



[www.okmilkbank.org](http://www.okmilkbank.org)

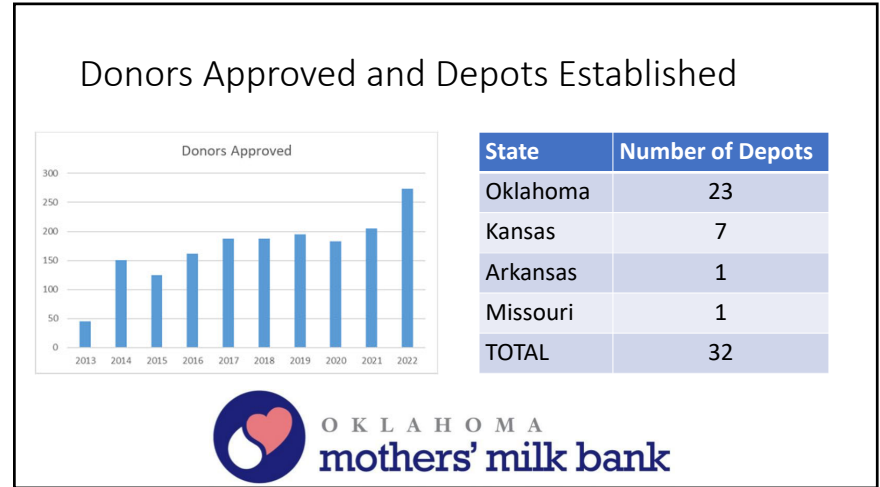
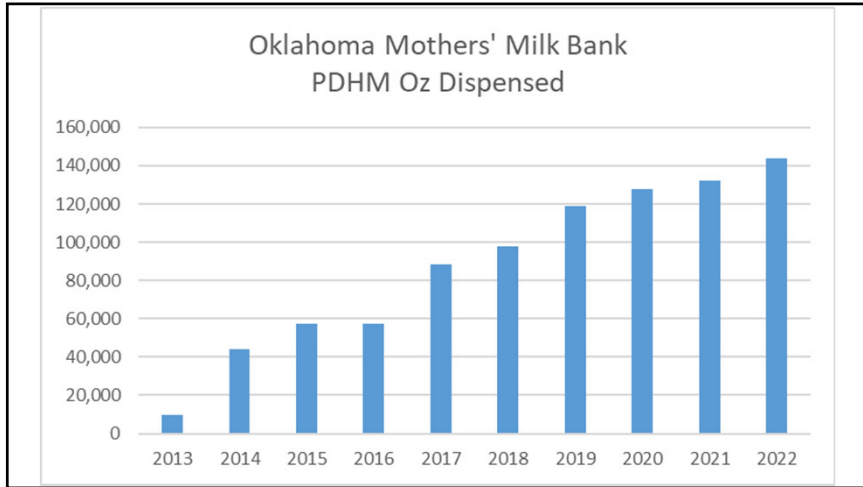
Our New Home!  
940 NE 13<sup>th</sup>, Garrison Tower, Ste 1220  
Oklahoma City  
405-297-LOVE



OKLAHOMA  
mothers' milk bank  
every ounce counts!

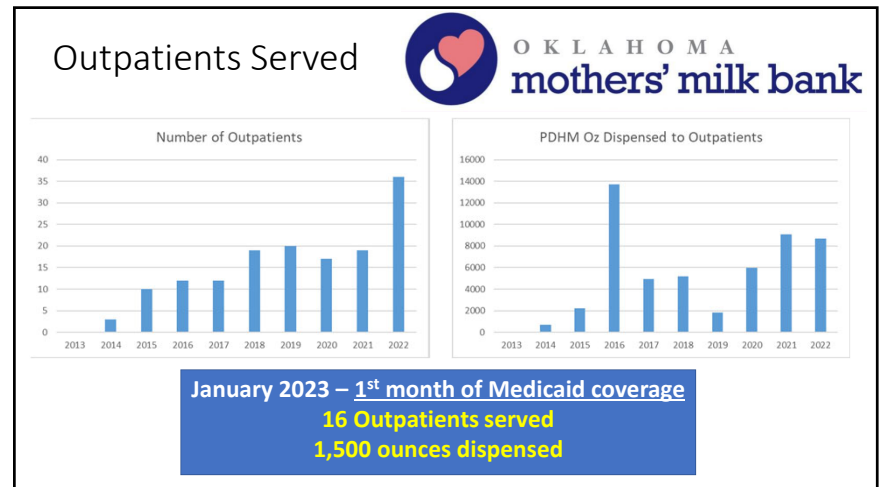
Thank you to City of Tulsa's ARPA Grant!





### Donor Human Milk Medicaid Benefit


- Medicaid coverage for PDHM *in a home setting*.
- Need provider order stating that PDHM is medically necessary.







*Casino Night Gala*  
*Save the Date*

**OKLAHOMA MOTHERS' MILK BANK**  
CELEBRATING 10 YEARS OF SAVING LIVES  
AUGUST 5, 2023  
THE SKIRVIN HILTON, OKLAHOMA CITY  
DOORS OPEN AT 6:30PM


Food, drinks, silent auction, gaming tables, awards, and more!



**Policy Priorities**

-  **Maternity Care**  
SB 183 Additional reimbursement for obstetrical care at Baby-Friendly designated hospitals
-  **Workplace Support**  
SB 182 Medicaid funding for breast pumps
-  **Access to Human Milk**  
SB 401 Allows lactating foster care providers to breastfeed a child with certain consent
-  **Paid Family Leave**  
SB 990 Creates the Oklahoma Paid Family Leave Program

**Our mission:**  
To promote, protect, and support breastfeeding in Oklahoma



405/297-5683 Ext 105  
info@okbreastfeeding.org

SB 183 – Senator Hicks

- Incentivize Baby-Friendly hospital designation

SB 182 – Senator Hicks

- Medicaid funding for breast pumps

SB 401 – Senator Dossett

- Lactating foster parents can breastfeed their foster baby

SB 990 – Senator Garvin

- Paid Family Leave

## Lactation Support for Incarcerated Mothers




- Collaboration with Mabel Bassett prison
- Awaiting final policy from Dept of Corrections
- COBA to fund lactation space and freezer
- OK Mothers' Milk Bank to deliver the mothers' milk to their infants




Parker et al. 2021. *Promoting Human Milk and Breastfeeding for the Very Low Birth Weight Infant*. AAP Clinical Report.

AAP Committee on Nutrition, Section on Breastfeeding, Committee on Fetus And Newborn. 2017. *Donor Human Milk for the High-Risk Infant: Preparation, Safety, and Usage Options in the United States*. Pediatrics.

Academy of Breastfeeding Medicine Clinical Protocol #12: *Transitioning the Breastfeeding Preterm Infant from the Neonatal Intensive Care Unit to Home*. BF Med 2018.

Key Publications about Breastfeeding and Preterm Infants