



TOTS Brief

The Oklahoma Toddler Survey

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What is TOTS?

The Oklahoma Toddler Survey (TOTS) is a two-year follow-back survey to the Oklahoma Pregnancy Risk Assessment Monitoring System (PRAMS) survey.

TOTS, developed in 1994, provides a glimpse into the health of Oklahoma's toddler population. Key topics include health insurance, child care, safety, tobacco exposure, breastfeeding and

nutrition, illness and activity limitations, injury, family structure, and maternal and paternal demographics.

Mothers with live infants who respond to the PRAMS survey are sent a TOTS survey the month their children turn 2-years-old. TOTS is a mixed-mode surveillance system. Two mail surveys are sent in an effort to gain participation

followed by telephone surveillance for non-respondents. The response rate for 2006-2009 data was 73.8% (n=5,221). Data were weighted to represent the 2-year-old's birth cohort for those years.

For more information please contact TOTS at the Oklahoma State Department of Health (OSDH) at 405-271-6761 or TOTS@health.ok.gov.

In Oklahoma:

- Almost 30% of infants were breastfed for at least six months. Thirteen percent were breastfed for at least 12 months and 3.9% breastfed for 18 months or more.
- Among Native American toddlers, 15.3% (CI 10.9, 21.0) were breastfed at least six months, the lowest percentage of all races for toddlers breastfed or given breast milk for at least six months.
- For Native American mothers, non-smokers were twice as likely as smokers to breastfeed for six months or more (45% vs. 23%).
- Maternal education was the most significant predictor of breastfeeding duration at six months among Native American mothers.

Breastfeeding Duration Among Native Americans

Breastfeeding is a health behavior with immediate and long-term health benefits for both the mother and her infant.¹ Advantages include nutritional, immunologic, developmental, psychological, social, economic, and environmental benefits.²

Maternal health benefits include decreased postpartum bleeding, decreased risk of ovarian and breast cancers, and an earlier return to pre-pregnancy weight. Child health benefits include reduced risks for common childhood illnesses such as diarrhea, respiratory tract infec-

tions, otitis media, and urinary tract infections. Most importantly, clinical studies indicate breastfeeding is an effective component in the prevention of childhood obesity.

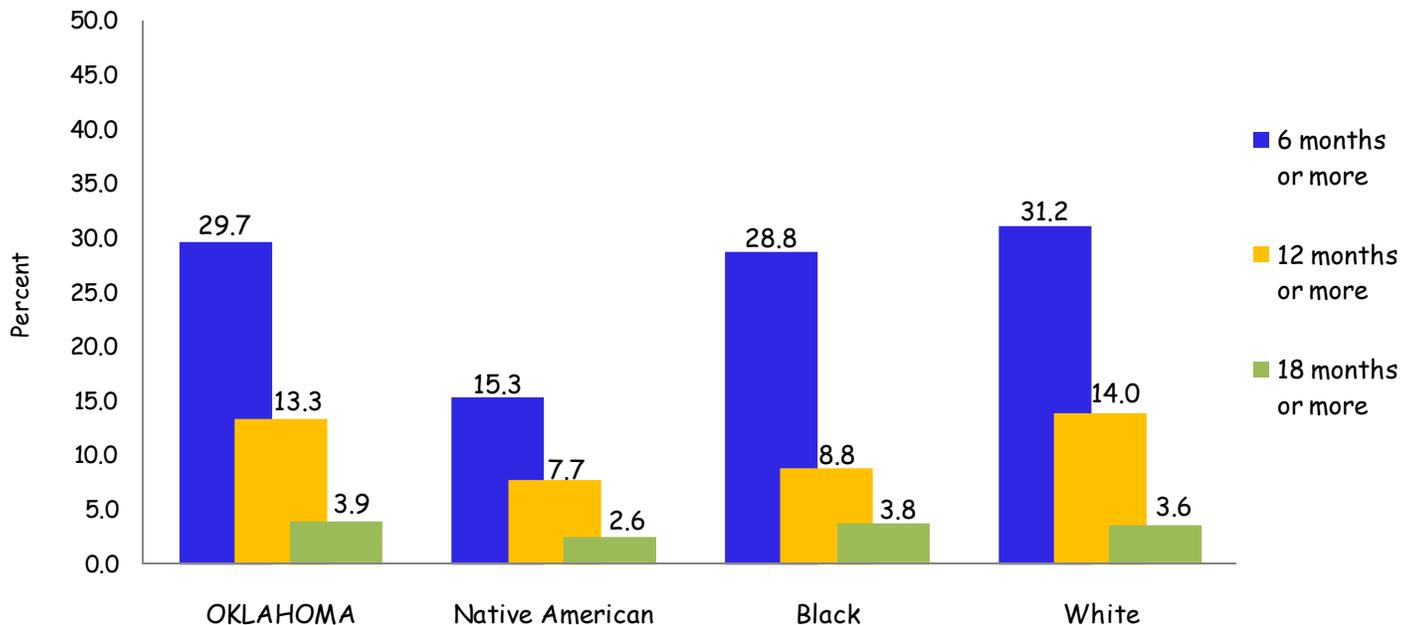
Breastfeeding duration has an inverse relationship to pediatric overweight.³ The Centers for Disease Control and Prevention (CDC) estimates that for every month a child is breastfed, his or her risk for childhood overweight decreases by 4%, reaching a plateau by nine months. Research shows a 30% decrease in the odds for being overweight for a child breastfed for at least eight

full months when compared to a child who was never breastfed.³ The American Academy of Pediatrics (AAP) recommends exclusive breastfeeding for at least six months.²

The breastfeeding goals set forth in Healthy People 2020 are to have at least 60.6% of infants breastfed for at least six months, and have 34.1% of infants breastfed until 12 months of age.

TOTS data from 2006-2009 indicate that among Oklahoma 2-year-olds only 29.7% (95% Confidence

Breastfeeding Duration Rates for Oklahoma's Toddlers by Maternal Race, TOTS 2006-2009



Only 7.7% of Native American mothers breastfed their babies until 12 months of age, far less than the 34.1% goal for Healthy People 2020.

Breastfeeding Duration, cont.

Interval (CI) 27.8-31.7) were breastfed for at least six months; and 13.3% (95% CI 11.9-14.8) were breastfed at least 12 months. Overall, Native American toddlers were shown to have the lowest duration rate at six months (15.3%, 95% CI 10.9-21.0) compared to white toddlers (31.2%, 95% CI 29.0-33.5).

Among Native Americans, maternal education was the only significant predictor of breastfeeding duration at six months when controlling for select maternal demographics, behaviors, and characteristics. Native American mothers who had attained at least a high school education were 14 times more likely to breastfeed for six months or more when compared to Native American mothers with less than a high school education (data not shown).

The OSDH Maternal and Child Health Service and the Oklahoma City Area Inter-Tribal Health Board Tribal

Epidemiology Center are working together to improve breastfeeding initiation and duration rates in Oklahoma.

Six evidence-based interventions to promote breastfeeding are: Maternity care practices; support for breastfeeding in the workplace; peer support; educating mothers; professional support; and media and social marketing. The effectiveness of professional education and public acceptance has yet to be established.⁴

References:

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3. Harder T, Bergmann R, Kallischnigg G, Plagemann A. Duration of breastfeeding and risk of overweight: a meta-analysis. *Am J Epidemiol* 2005; 162:397-403.
4. Shealy KR, et al. The CDC Guide to Breastfeeding Interventions. Atlanta: US DHHS, CDC, 2005.

Acknowledgements

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