

Perinatal Oral Health Practices Among Mothers of Native American Infants: A Look at Michigan PRAMS Data

Beth Anderson, MPH, Peterson Haak, Emily Norrix, MPH
Michigan Department of Health and Human Services

INTRODUCTION

A healthy mouth is a crucial component of a healthy pregnancy for both mother and child.¹ Research has shown that women are less likely to receive needed dental care during their pregnancy, despite insurance coverage and research linking poor oral health with poor birth outcomes.² Limited perinatal oral health data has been available in Michigan, but this is the first time data has been analyzed regarding rates of utilization of dental care during pregnancy for the Native American (NA) population.

Objective
To examine the utilization of dental care during pregnancy among Michigan mothers of Native American infants and identify areas for impactful intervention

METHODS

From 2012-2013 Michigan conducted the Native American Pregnancy Risk Assessment Monitoring System (NA PRAMS) survey. NA PRAMS was a multi-mode survey (mail and phone) that collected self-reported maternal behaviors that occurred before, during, and after pregnancy. Mothers were selected for NA PRAMS if **their infant** had any native ancestry listed on the birth certificate - from the mother's or father's side. NA PRAMS results were combined with those from 2012-2013 Michigan PRAMS so that the pregnancy health of mothers of NA infants could be examined in the context of the whole state.

We used SAS SURVEYFREQ procedures to obtain weighted population-level estimates for the eight oral health questions that were included in both NA PRAMS and MI PRAMS surveys. Point estimates for population prevalence and variance estimates were obtained using Taylor series linearization. Results are reported with 95% confidence intervals. We used the RISK output option to calculate the difference in proportions between groups; if the 95% confidence interval for a risk difference did not contain 0 then the difference was statistically significant at the $p < 0.05$ level.

NA PRAMS Survey Questions on Pregnancy and Oral Health

- At any time during the 12 months before you got pregnant, did you do any of the following things? I had my teeth cleaned by a dentist
- I knew it was important to care for my teeth and gums during my pregnancy
- A dental or other health care worker talked with me about how to care for my teeth and gums
- I had my teeth cleaned by a dentist or dental hygienist
- I had insurance to cover dental care during my pregnancy
- I needed to see a dentist for a problem
- I went to a dentist or dental clinic for a problem

REFERENCES

1. American College of Obstetricians and Gynecologists (ACOG). (2013). ACOG Committee Opinion number 569: Oral health care during pregnancy and through the lifespan.
2. Boggess KA, Edelstein BL. Oral health in women during preconception and pregnancy: Implications for birth outcomes and infant oral health. *Matern Child Health J* 2006;10:S169-174.

RESULTS

The combined 2012-2013 MI and NA PRAMS survey received responses from 2,394 mothers of NA infants and 3,955 mothers of non-native infants. Almost 90% of all mothers reported they knew it was important to have their teeth cleaned while pregnant. However, less than half of mothers of NA infants did (Table 1). Significantly more mothers of NA infants reported needing dental care due to a problem while they were pregnant compared to all other Michigan mothers as well as non-Hispanic White (NHW) and non-Hispanic Black (NHB) mothers, Table 1 and Figure 1.

Figure 1. Prevalence of oral health behaviors among NHW mothers, NHB mothers, and mothers of NA infants, Michigan 2012-2013.

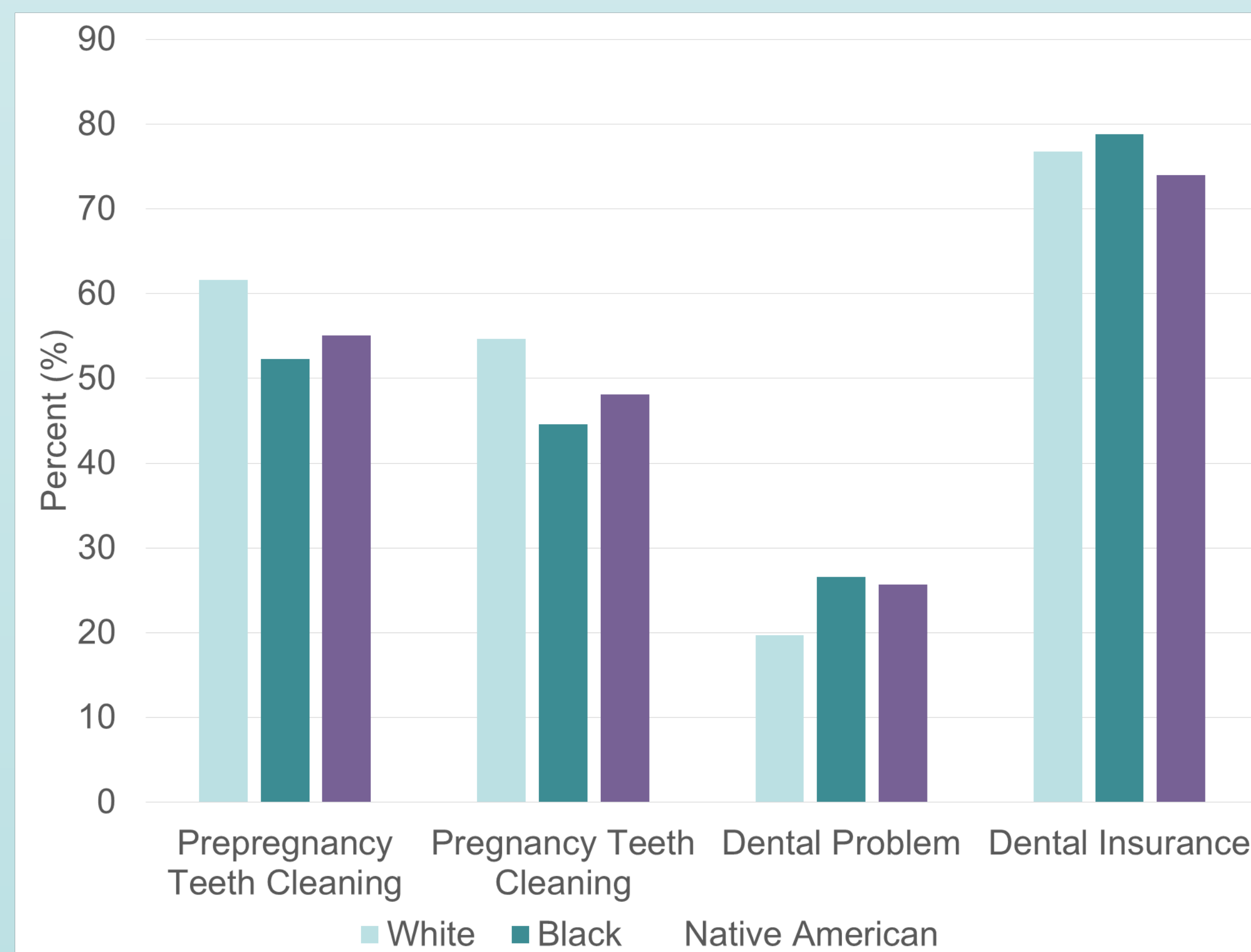


Table 1. Prevalence of oral health behaviors among pregnant women, Michigan 2012-2013.

	Mothers of Native American Infants % (95% CI)	All Other Michigan Mothers % (95% CI)
Pre-pregnancy teeth cleaning*	55.1 (52.9-57.3)	59.3 (57.2-61.5)
Important to clean teeth during pregnancy	90.5 (89.2-91.9)	89.2 (87.9-90.5)
Health professional spoke with me about oral health care	51.2 (49.0-53.4)	53.1 (51.0-55.3)
Teeth cleaned during pregnancy*	48.1 (45.9-50.3)	51.8 (49.6-54.0)
Dental insurance during pregnancy	74.0 (72.1-76.0)	75.9 (74.0-77.8)
Needed dental care due to a problem*	25.7 (23.8-27.6)	21.3 (19.5-23.1)
Received dental care due to a problem*	18.5 (16.8-20.3)	15.5 (13.9-17.0)

* Prevalence difference between these two groups is significant at $p < 0.05$

Compared to NHW mothers, mothers of NA infants were less likely to have their teeth cleaned before pregnancy, have their teeth cleaned during pregnancy, and were more likely to report dental problems requiring care during pregnancy. Compared to NHB mothers, mothers of NA infants were less likely to have dental insurance coverage during pregnancy.

Figure 1.

DISCUSSION

The 2012-2013 NA PRAMS survey is the first population-based pregnancy health study conducted among Michigan mothers of NA infants. This population is often underrepresented in surveys making it difficult to estimate the true magnitude of health disparities. Many of health behaviors of mothers of NA infants are similar to pregnant women across Michigan, however, there were disparities that stood out, specifically, in regards to dental insurance and teeth cleaning during pregnancy.

Michigan is working to address these disparities through trainings with various partners throughout the state. Further educational efforts targeted specifically at the Native American community are needed to continue to address these disparities.

Conclusions and Implications: