

Maternal Oral Health Care in Montana, 2017-2019

What is PRAMS?

The Montana Pregnancy Risk Assessment Monitoring System (PRAMS) is a survey of recent mothers about their experiences and behaviors before, during, and shortly after pregnancy. PRAMS aims to improve the health of Montana mothers and infants by collecting high-quality data that is representative of the Montana population. The project is a collaborative effort between the Montana Department of Public Health and Human Services (DPHHS) and the Centers for Disease Control and Prevention (CDC).

Maternal Oral Health Care

Oral health care is an important part of prenatal care. Upwards of 75% of pregnant women may develop gingivitis, where their gums swell and bleed easily, an early stage of periodontal disease.¹ If left untreated, gingivitis may lead to more severe gum disease. Additionally, poor oral health has been linked to poor pregnancy outcomes.¹ The majority of dental work is safe during pregnancy (e.g. teeth cleaning, dental x-rays, filling of a decayed tooth), and regular teeth cleanings before, during, and after pregnancy can help protect against gum disease.¹

Nationally, the Title V Maternal and Child Health

Block Grant National Performance Measure goal for maternal oral health is to increase the number of pregnant women who have a dental visit during pregnancy, and the Healthy People 2030 objective is to increase the proportion of children, adolescents, and adults who use the oral health care system.

Fast Facts

- ♥ **Most mothers** - 91% - knew it was important to care for teeth and gums during pregnancy, but only 50% had their teeth cleaned.
- ♥ Mothers who reported a **health care worker talked to them** about oral health were more likely to have their teeth cleaned during pregnancy (78% vs. 15%).
- ♥ 26% of mothers **did not have dental insurance** during pregnancy and **only 1 in 3** mothers without dental insurance reported having their teeth cleaned.
- ♥ Mothers that are American Indian, younger, have less education, are on public insurance, have lower income, and those living in rural counties were less likely to have their teeth cleaned.

Table 1. Proportion of mothers having teeth cleaned before and during pregnancy

PRAMS Indicator	Montana % (95% CI)*			National Data** % (95% CI)*
	2017	2018	2019	2019
During 12 months before pregnancy had teeth cleaned by a dentist or dental hygienist	45.4% (42.3-48.6)	44.7% (41.4-48.1)	43.8% (40.3-47.3)	-
During pregnancy had teeth cleaned by a dentist or dental hygienist	47.0% (43.8-50.2)	50.3% (46.9-53.8)	50.3% (46.6-53.9)	45.9% (45.1-46.7)

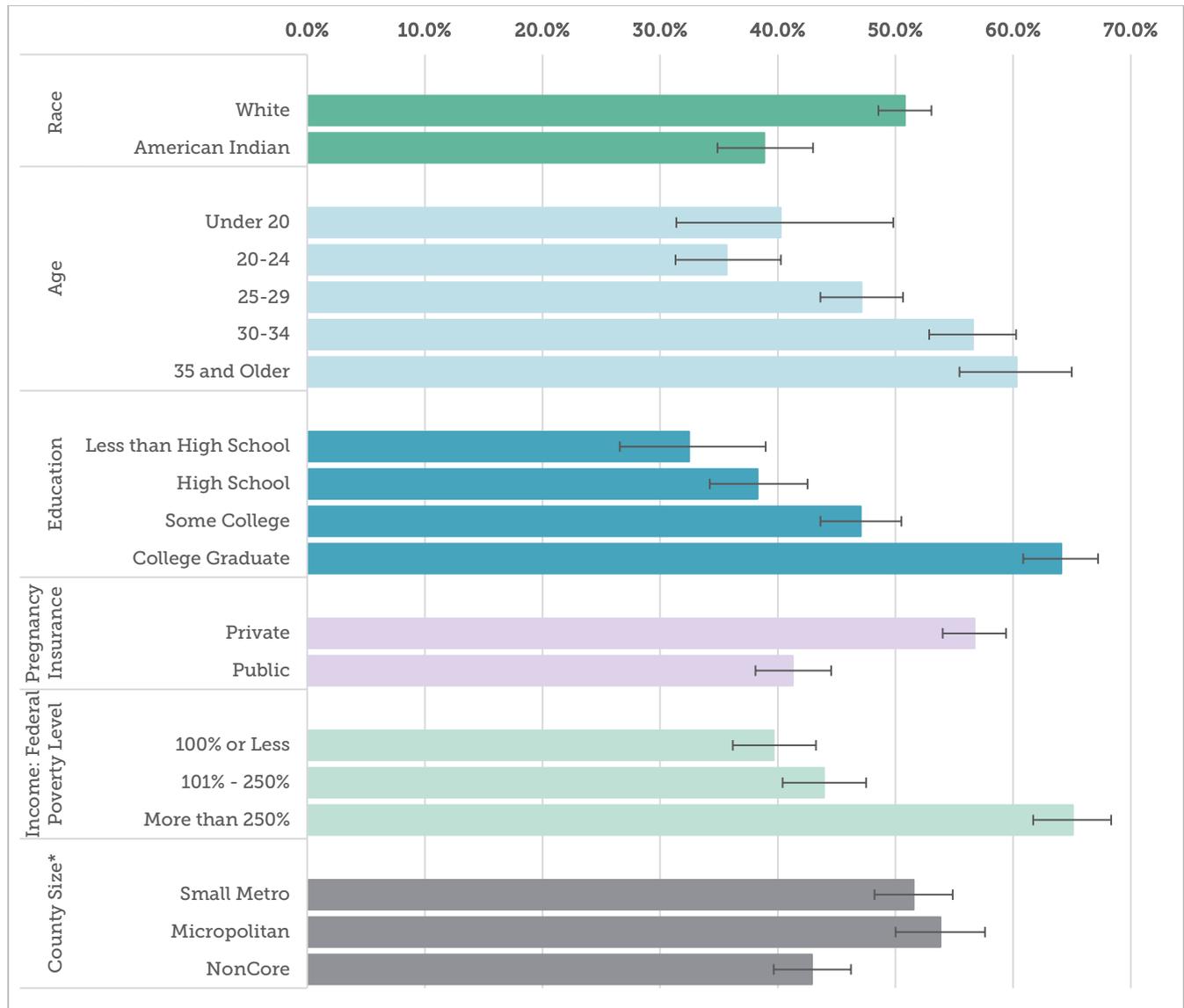
*Weighted percent (95% Confidence Interval). Weighted Percent is the estimated percent representing a population based on only a sample of the population. The weighted percent considers sampling, nonresponse, and noncoverage to calculate the estimate. Confidence Interval is a range of values that is likely to include the population value with a degree (i.e., 95%) of confidence.

**National Data are estimates that include PRAMS sites that meet or exceed the CDC response rate threshold for the survey year.



A total of 2,472 mothers responded to PRAMS from 2017 to 2019 (937 in 2017, 809 in 2018, and 726 in 2019). In 2019, Montana mothers reported a slightly higher prevalence of having their teeth cleaned during pregnancy than mothers nationally (Table 1). When stratified by maternal characteristics, differences can be seen among mothers who had their teeth cleaned during pregnancy (Figure 1). American Indian mothers, younger mothers (aged under 20 to 29), mothers with less than a college degree, mothers on public health insurance, mothers whose income is 250% or less of the federal poverty level, and mothers living in noncore counties had lower prevalence of a dental cleaning during pregnancy.

Figure 1. Proportion of teeth cleaning during pregnancy by maternal characteristics, 2017-2019



*NCHS Urban-Rural Classification Scheme for Counties

Table 2 displays the adjusted odds ratios of during pregnancy teeth cleaning for maternal characteristics and birth outcomes, controlling for the selected maternal characteristics of race, age, education, insurance, income, and county size. Mothers with less than adequate prenatal care and births with infants who were small for gestational age had statistically significant lower odds of teeth cleaning during pregnancy. However, mothers participating in WIC had statistically significant



higher odds of teeth cleaning (OR 1.5, CI 1.18-1.92) when compared to mothers not participating in WIC.

Table 2. Association between maternal characteristics & birth outcomes and teeth cleaning during pregnancy, 2017-2019

Maternal Characteristic/Birth Outcome		Proportion (95% CI)****	Adjusted OR (95% CI)*****
WIC Participation	Yes	45.0% (41.4-48.8)	1.73 (1.33-2.24)***
	No	51.0% (48.6-53.3)	Ref
Prenatal Care	Inadequate/Intermediate	38.9% (35.0-43.0)	0.78 (0.62-0.98)*
	Adequate/Adequate Plus	52.2% (49.9-54.4)	Ref
Preterm Birth	Yes	45.1% (38.1-52.3)	0.82 (0.53-1.29)
	No	49.5% (47.4-51.6)	Ref
Low Birth Weight	Yes	41.1% (33.6-49.1)	0.84 (0.5-1.39)
	No	49.7% (47.7-51.7)	Ref
Small for Gestational Age	Yes	40.2% (34.3-46.4)	0.72 (0.53-0.97)*
	No	50.2% (48.0-52.3)	Ref

* P<.05, ** P<.01, *** P<.001

****Weighted percent (95% Confidence Interval)

*****Odds ratio (OR) is a measure of association between a characteristic and an outcome. Adjusted OR controls for other characteristics. Adjusted for Race, Age, Education, Insurance, Income, County Size.

Table 3 shows the prevalence of mothers reporting various oral health indicators, including knowledge, insurance, and dental health care interactions during pregnancy. Figure 2 displays mothers reported teeth cleaning during pregnancy by discussion with a health care worker about oral health, insurance coverage, and knowledge of oral health importance. Despite only approximately half of mothers reporting having had a health care worker talk with them about oral health, most mothers (90.8%) knew it was important to care for teeth and gums during pregnancy. Importantly, mothers who reported a health care worker talked to them about how to care for teeth and gums had a higher prevalence of receiving a teeth cleaning during pregnancy than mothers who did not have a health care worker speak to them about oral health care (77.9% vs 15.0%, respectively). Additionally, most mothers (83.4%) who did not know it was important to care for teeth and gums during pregnancy did not get their teeth cleaned.

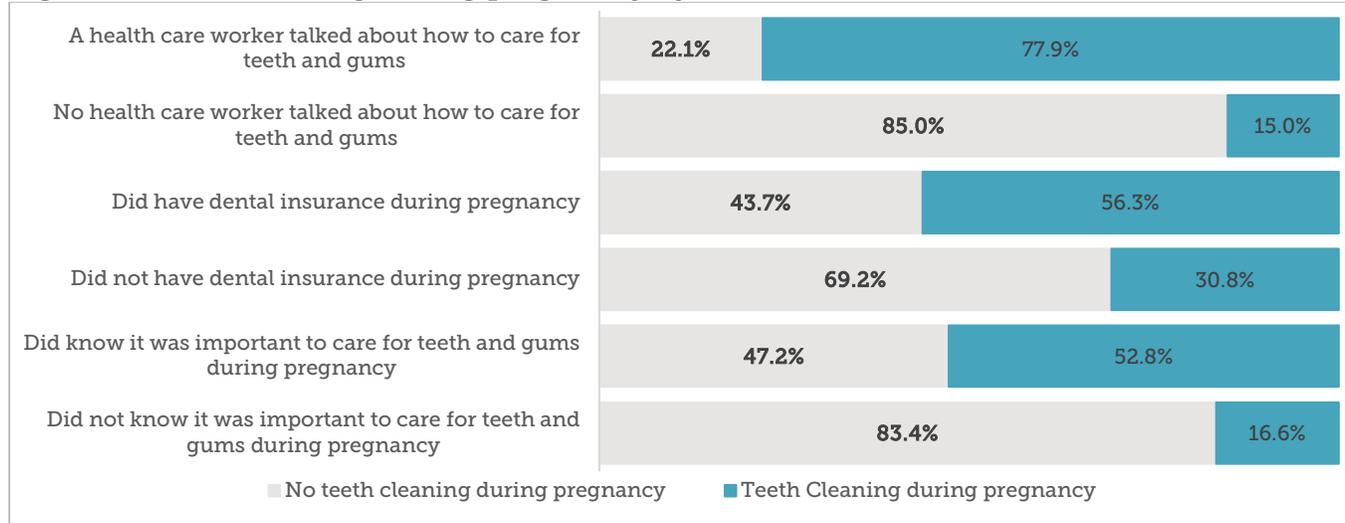
Table 3. Proportion of oral health care indicators during pregnancy, 2017-2019

PRAMS Indicator	Proportion (95% CI)*
Knew it was important to care for teeth and gums during pregnancy	90.8% (89.5-91.9)
A dental or other health care worker talked about how to care for teeth and gums	54.9% (52.9-56.9)
Had insurance to cover dental care during pregnancy	74.1% (72.3-75.9)
Needed to see a dentist for a problem	19.8% (18.3-21.5)
Went to a dentist or dental clinic about a problem	17.5% (16.1-19.1)

*Weighted percent (95% Confidence Interval)



Figure 2. Teeth cleaning during pregnancy by selected oral health indicators, 2017-2019



Recommendations for Practitioners and Public Health Professionals

In their Consensus Statement on Oral Health Care During Pregnancy the National Maternal and Child Oral Health Resource Center suggests that prenatal care health professionals may be the “first line” in assessing pregnant women’s oral health and can provide referrals to oral health professionals and reinforce preventive messages.² The consensus statement recommends health professionals:

- Assess pregnant women’s oral health status
- Advise pregnant women about oral health care
- Work in collaboration with oral health professionals
- Provide support services (case management) to pregnant women, and
- Improve health services in the community²

Public health professionals should advocate for programs and policies to support these recommendations. Examples include: interprofessional education of health professionals to include oral health, financial incentives for oral health assessment and education provided by non-dental providers, medical-dental integration pilot projects specifically addressing prenatal oral health.

Resources

- [American Dental Association Oral Health During Pregnancy Website](#)
- [Centers for Disease Control and Prevention Pregnancy and Oral Health Website](#)

References

1. Center for Disease Control and Prevention, 2020. *Pregnancy and Oral Health*. [Online] Available at: <https://www.cdc.gov/oralhealth/publications/features/pregnancy-and-oral-health.html>
2. Oral Health Care During Pregnancy Expert Workgroup, 2012. *Oral Health Care During Pregnancy: A National Consensus Statement*. [Online] Available at: <https://www.mchoralhealth.org/PDFs/OralHealthPregnancyConsensus.pdf>

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Questions?

Visit our website at <https://dphhs.mt.gov/prams> or
Contact Montana PRAMS at 1-800-762-9891 or PRAMS@mt.gov