

Gestational Diabetes Prevalence and Receipt of Prenatal Oral Health Care and Counseling in New York State, 2016-2022

Key Findings for New York State:

- About 1 in 8 (12.1%) New Yorkers had gestational diabetes.
- Among individuals with gestational diabetes:
 - Less than 2 in 5 (38.3%) had a dental cleaning during pregnancy.
 - Around 2 in 5 (42.7%) received counseling from a dental or other health care worker about how to care for their teeth and gums during pregnancy.

INTRODUCTION

Gestational diabetes diagnoses are rising among pregnant women in the United States (U.S.), increasing from 6.0% in 2016 to 8.3% in 2021.¹ If left unmanaged, gestational diabetes can lead to high blood glucose (sugar) levels that pose health risks to both mother and baby.²⁻³ While medical providers routinely screen for and treat certain health conditions (including gestational diabetes) at regular prenatal care visits, oral health conditions and care are often not considered.⁴⁻⁵ However, periodontal (gum) disease affects most (60-75%) pregnant women in the U.S. and shares an important connection with gestational diabetes, where each condition can worsen the other.

Individuals with gestational diabetes can have higher levels of glucose in their saliva, increasing the risk or progression of existing periodontal disease. In turn, periodontal disease can lead to higher blood glucose levels, increasing the risk of gestational diabetes or making it more difficult to manage.⁶⁻⁹ For individuals with gestational diabetes, regular dental care and good oral hygiene practices may help prevent or treat existing periodontal disease and improve blood sugar control.¹⁰⁻¹¹

Using 2016-2022 New York State (NYS) Pregnancy Risk Assessment Monitoring System (PRAMS) data we examined gestational diabetes prevalence and, among those identified with gestational diabetes, prenatal dental cleaning and counseling about how to maintain good oral hygiene during pregnancy (see Methods for more details).

GESTATIONAL DIABETES IN NYS

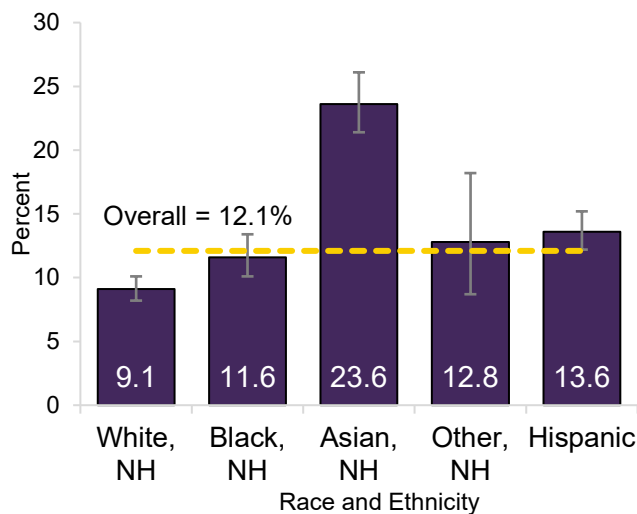
Overall, about 1 in 8 (12.1%) New Yorkers had gestational diabetes (Figure 1).

In the U.S., racial and ethnic minority groups are at higher risk for gestational diabetes, especially those who are Asian, non-Hispanic.¹²⁻¹⁴ This same pattern of disparities was present in NYS, with the following groups having the highest prevalence of gestational diabetes (Figure 1):

- Asian, non-Hispanic (23.6%);
- Hispanic (13.6%); and
- Black, non-Hispanic (11.6%).

Additionally, gestational diabetes was most prevalent among those who were obese (18.0%); 35 years or older (16.1%); less than high school educated (15.5%); and Medicaid-insured (13.0%) (Table 1).

Figure 1. Percentage of individuals who had gestational diabetes by race and ethnicity, NYS PRAMS, 2016-2022



NH = non-Hispanic
Significant difference ($p < 0.05$ for the chi-square test).

DENTAL CLEANING DURING PREGNANCY

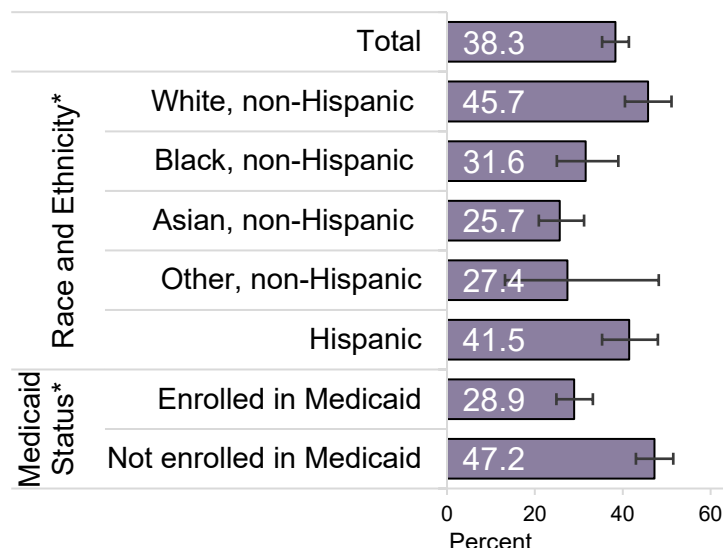
Less than 2 in 5 (38.3%) NYS individuals with gestational diabetes had a dental cleaning during pregnancy (Figure 2).

Historically, U.S. racial and ethnic minority and low income (Medicaid-insured) populations encounter more barriers to dental care.¹⁵⁻¹⁶

In NYS, the following groups were less likely to have had a dental cleaning during pregnancy (Figure 2):

- Black, non-Hispanic (31.6%);
- Asian, non-Hispanic (25.7%); and
- Medicaid-insured (28.9%).

Figure 2. Percentage of individuals[^] who had a dental cleaning during pregnancy, NYS PRAMS, 2016-2022



[^]Among those with gestational diabetes.

*Indicates a significant difference ($p < 0.05$ for the chi-square test).

American College of Obstetricians and Gynecologists (ACOG) clinical guidance on oral health care during pregnancy and through the lifespan⁵

To support general health and well-being, women should routinely be counseled about the maintenance of good oral health habits throughout their lives as well as the safety and importance of oral health care during pregnancy.

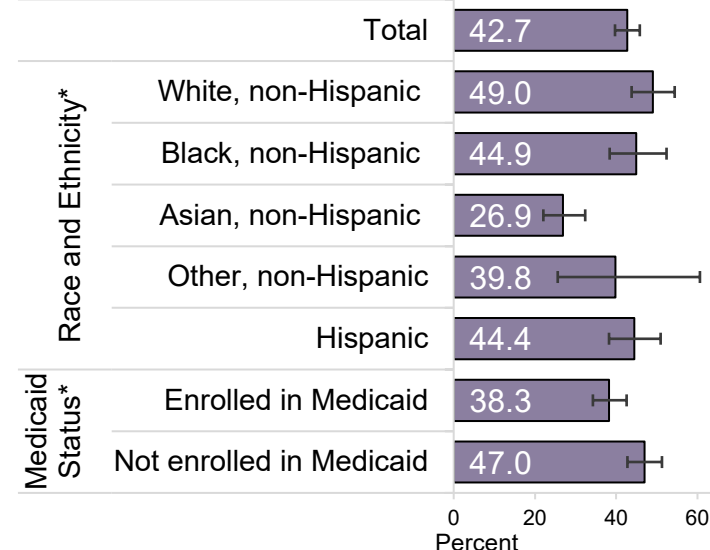
COUNSELING ABOUT CARING FOR TEETH AND GUMS DURING PREGNANCY

Around 2 in 5 (42.7%) NYS individuals with gestational diabetes received counseling from a dental or other health care worker about how to care for their teeth and gums during pregnancy (Figure 3).

The following groups were less likely to have received this counseling (Figure 3):

- Asian, non-Hispanic (26.9%); and
- Medicaid-insured (38.3%).

Figure 3. Percentage of individuals[^] who received counseling about caring for teeth and gums during pregnancy, NYS PRAMS, 2016-2022



[^]Among those with gestational diabetes.

*Indicates a significant difference ($p < 0.05$ for the chi-square test).

OPPORTUNITIES FOR ACTION

Gestational diabetes is becoming increasingly common in NYS and the U.S., representing a growing population at risk for pregnancy-related health problems.^{3,17} In NYS from 2016-2022, about 1 in 8 (12.1%) individuals had gestational diabetes, with Asian, non-Hispanic (23.6%), Hispanic (13.6%), and Black, non-Hispanic (11.6%) populations facing a higher prevalence compared with White, non-Hispanic individuals (9.1%).

Regular dental visits and good oral hygiene practices may help improve blood sugar control for those with gestational diabetes. However, among individuals with gestational diabetes in NYS, less than 2 in 5 (38.3%) had their teeth cleaned during pregnancy and only around 2 in 5 (42.7%) received counseling about caring for their teeth and gums during pregnancy. Moreover, Asian, non-Hispanic, Black, non-Hispanic, and Medicaid-insured populations with gestational diabetes were even less likely to receive these preventive oral health interventions. These findings signal multiple missed opportunities to address oral health needs during pregnancy, especially among those at greatest risk.

Since prenatal care providers regularly meet with patients throughout pregnancy, they can help bridge some of these gaps by encouraging dental visits and counseling patients about the importance of good oral health habits (pursuant to ACOG guidelines).⁵ Longer-term solutions to improve and eliminate disparities in dental care availability and access are needed. About 50% of individuals who develop gestational diabetes will go on to develop Type 2 diabetes later in life, which shares the same two-way relationship with periodontal disease.^{2,9} Therefore, for this high-risk population, establishing regular dental care and good oral health habits during pregnancy can help set individuals up for better long-term health. Medical and dental professionals are encouraged to work together to monitor and address the oral health needs of all New Yorkers, during pregnancy and over the life course.

RECOMMENDED ACTIONS AND RESOURCES

Actions

Healthcare providers are encouraged to integrate oral health into prenatal services by taking the following actions:

See the New York State Department of Health [“Oral Health Care During Pregnancy and Early Childhood Practice Guidelines”](#) for more information:

- Assess patients for problems with teeth and gums and make referrals to an oral health care provider, if appropriate.
- At the first prenatal visit, encourage all patients to schedule an oral health examination if they have not had one in the last six months or if their oral health has changed.
- Encourage all patients to adhere to their oral health care provider’s recommendations regarding appropriate follow-up.
- In the prenatal care plan, document whether the patient is already under the care of an oral health professional or if a referral was made.
- Develop a list of oral health providers to refer patients to.
- Provide patients with written oral health referrals along with a list of oral health providers.
- Coordinate with oral health providers by sharing clinical information, as appropriate, and responding to questions.
- Reassure patients that oral health care, including use of radiographs, pain medication, routine dental care and local anesthesia, is safe throughout pregnancy.

For Both Medical and Dental Providers:

See the Centers for Disease Control and Prevention (CDC) [“How to Promote Oral Health for People with Diabetes”](#) for more information:

- Counsel patients about the maintenance of good oral health habits throughout their lives, as well as the safety and importance of oral health care during pregnancy.
- Know the risks of oral diseases for pregnant patients, especially those with diabetes (including gestational diabetes).
- Encourage patients to watch for oral health problems.
- Ask patients about their oral health at each visit.
- Help patients see the connection between diabetes (including gestational diabetes) and oral health.
- Develop collaborations to support coordinated care, develop bidirectional communication pathways, and facilitate patient referrals.
- Communicate to patients that gestational diabetes in pregnancy increases the risk of developing Type-2 diabetes later in life.

Pregnant Individuals:

See the Health Resources and Services Administration [“Oral Health and Pregnancy”](#) for more information:

- If your last dental visit took place more than 6 months ago or if you have any oral health problems or concerns, schedule a dental appointment as soon as possible.
- Tell dental staff that you are pregnant. This information helps staff provide the best care for you.
- Ask your dentist to consult with your obstetrician (pregnancy doctor) if you need medicine or anesthesia. Your obstetrician can give advice about medicines that are safe during pregnancy.
- Brush your teeth twice a day. Use a soft toothbrush and fluoride toothpaste to brush in the morning and before bed. Do not rinse after brushing. The small amount of toothpaste that stays in your mouth is good for the teeth.
- Floss once a day. Flossing cleans between teeth where a toothbrush cannot reach.
- If you vomit or have heartburn, rinse your mouth afterward with a teaspoon of baking soda in a cup of water, to help prevent damage to your teeth from stomach acid.

Health Care Insurance:

- Consider expanding coverage to include the following preventive care:
 - Screening for evidence of periodontal disease in primary care practices.
 - Advanced periodontal treatments/surgeries for diabetic patients to prevent further systemic complications from diabetes.
- Include preventive oral health care for adults as an essential health benefit under the Affordable Care Act (ACA).

State and Local Health Departments Can Work Together to:

- Enhance data collection and sharing systems between state and local agencies to monitor trends in diabetes and oral health outcomes.
- Raise public awareness about the connection between diabetes and oral health during pregnancy and over the life course, emphasizing the importance of regular dental visits and blood sugar control.
- Collaborate with community organizations and health systems to extend outreach and support for preventive services.
- Allocate funding to support preventive care, screenings, and patient education initiatives at the local and state levels.

Resources

Healthcare Providers:

- [Clinical Guidance for Oral Health during Pregnancy](#): Educates providers about the latest American College of Obstetricians and Gynecologists (ACOG) clinical guidelines around oral health care during pregnancy and throughout the lifespan.
- [Talking to Pregnant Women about Oral Health](#), [Promoting Oral Health](#), and [Smiles for Life](#): Provide guidance and resources for health care providers to talk to their pregnant patients and new parents about the importance of oral health.
- [Oral Health Care During Pregnancy: A National Consensus Statement](#): Provides guidance for prenatal care and oral health professionals about how to assess women's oral health status, advise pregnant women about oral health care, and work together to support pregnant patients.
- [Oral Health Care During Pregnancy and Early Childhood Practice Guidelines](#): Provides extensive clinical practice guidelines related to oral health during pregnancy and early childhood.
- [Policy Statement: Perinatal Oral Health](#): Presents a comprehensive strategic framework for improving perinatal oral health.

Patients:

- [Dental Care Is Safe and Important During Pregnancy](#): Educates pregnant patients about the importance of oral health across the lifespan and during pregnancy.
- [Give Your Baby the Best Possible Start](#): Educates pregnant patients about practicing good oral hygiene during pregnancy to protect their own teeth and their baby's teeth.
- [Diabetes, Gum Disease, and Other Dental Problems](#): Provides information about how diabetes affects the mouth, how to know if you have mouth problems from diabetes, and how to keep your mouth healthy.

Reports, Guidance Documents, and Additional Information:

- [New York State Pregnancy Risk Assessment Monitoring System Data Dashboard](#) presents information on 128 unique indicators across 22 topic areas (e.g., breastfeeding, prenatal health conditions, safe sleep, postpartum depression). Indicators can be viewed by region (where available), maternal age, race and ethnicity, education, marital status, and Medicaid status.
- [New York State Department of Health-Generated Behavioral Risk Factor Surveillance System Reports](#) from 1995 through the present. Each report provides key findings about a specific topic, graphs and tables, references and contact information

METHODS

The Pregnancy Risk Assessment Monitoring System (PRAMS) is a survey of individuals who recently gave birth, completed sometime during the three to nine months since the baby was born (4 months on average). The NYS Department of Health collects PRAMS data for NYS outside of NYC. PRAMS data for NYC are collected by the NYC Department of Health and Mental Hygiene, and survey questions may differ among the two jurisdictions.

We analyzed these data from 2016-2022, including 9,337 residents from New York City (NYC) and 5,767 residents from NYS outside of NYC. We examined gestational diabetes and oral health outcomes during by individual characteristics (age, race/ethnicity, educational attainment, marital status, and insurance types) and pregnancy intention. All percentages are weighted to represent the underlying population.

To produce population type n-based estimates, each respondent was assigned a sampling weight.¹⁸ These sampling weights account for varying probabilities of selection of NYS residents for the PRAMS sample because of stratification by birthweight (all years) and healthy start program participation (2017-2018 only). Other components of these sampling weights account for non-response and non-coverage. The weight can be interpreted as the number of individuals in the population that each respondent represents. The sampling weights are incorporated in the analyses to produce the weighted percent and 95% CI of the response for selected questions. The weighted estimates and confidence intervals are produced using the “surveyfreq” procedure in Statistical Analysis System (SAS) software. Unknown or missing values are not included in the analysis.

Individuals were categorized as having gestational diabetes if they selected “gestational diabetes” as one of the health conditions they had during pregnancy or if they were classified as having gestational diabetes on their birth certificate. To prevent misclassification, those who self-reported both gestational diabetes and pre-pregnancy diabetes on the PRAMS survey and did not have gestational diabetes on their birth certificate to verify were excluded from this analysis.

The PRAMS survey questions, including those related to diabetes status and prenatal oral health care and counseling receipt, are based on self-report and rely on respondents’ recall of their behaviors in the perinatal period (before, during, and after pregnancy), thus responses may be potentially impacted by recall bias.

REFERENCES

- ¹ Centers for Disease Control and Prevention. QuickStats: Percentage of Mothers with Gestational Diabetes,* by Maternal Age — National Vital Statistics System, United States, 2016 and 2021. Published January 6, 2023. Accessed April 22, 2026. [cdc.gov/mmwr/volumes/72/wr/mm7201a4.htm](https://www.cdc.gov/mmwr/volumes/72/wr/mm7201a4.htm)
- ² Centers for Disease Control and Prevention. Gestational Diabetes. Last reviewed May 15, 2024. Accessed April 22, 2026. [cdc.gov/diabetes/about/gestational-diabetes.html](https://www.cdc.gov/diabetes/about/gestational-diabetes.html).
- ³ American Diabetes Association. Gestational Diabetes. Accessed June 26, 2026. diabetes.org/living-with-diabetes/pregnancy/gestational-diabetes
- ⁴ ACOG Practice Bulletin No. 190: Gestational Diabetes Mellitus. *Obstet Gynecol*. 2018;131(2):e49-e64. doi:10.1097/AOG.0000000000002501
- ⁵ Committee Opinion No. 569: oral health care during pregnancy and through the lifespan. *Obstet Gynecol*. 2013;122(2 Pt 1):417-422. doi:10.1097/01.AOG.0000433007.16843.10
- ⁶ Centers for Disease Control and Prevention. About Periodontal (Gum) Disease. Last reviewed May 15, 2024. Accessed April 14, 2026. [cdc.gov/oral-health/about/gum-periodontal-disease.html](https://www.cdc.gov/oral-health/about/gum-periodontal-disease.html).
- ⁷ García-Martos JM, Valverde-Bolívar FJ, Campillo-López MT, Delgado-Rodríguez M. Association between periodontal disease and gestational diabetes: Systematic review and meta-analysis. *Prim Care Diabetes*. 2025;19(1):1-6. doi:10.1016/j.pcd.2024.11.003
- ⁸ Bendek MJ, Canedo-Marroquín G, Realini O, Retamal IN, Hernández M, Hoare A, Busso D, Monteiro LJ, Illanes SE, Chaparro A. Periodontitis and Gestational Diabetes Mellitus: A Potential Inflammatory Vicious Cycle. *International Journal of Molecular Sciences*. 2021; 22(21):11831. <https://doi.org/10.3390/ijms222111831>
- ⁹ Preshaw PM, Alba AL, Herrera D, et al. Periodontitis and diabetes: a two-way relationship. *Diabetologia*. 2012;55(1):21-31. doi:10.1007/s00125-011-2342-y.
- ¹⁰ Simpson TC, Clarkson JE, Worthington HV, et al. Treatment of periodontitis for glycaemic control in people with diabetes mellitus. *Cochrane Database Syst Rev*. 2022;4(4):CD004714. Published 2022 Apr 14. doi:10.1002/14651858.CD004714.pub4
- ¹¹ Choi SE, Sima C, Pandya A. Impact of Treating Oral Disease on Preventing Vascular Diseases: A Model-Based Cost-effectiveness Analysis of Periodontal Treatment Among Patients With Type 2 Diabetes. *Diabetes Care*. 2020;43(3):563-571. doi:10.2337/dc19-120

- ¹² Lam EL, Walker JM, Wang MC, et al. Gestational Diabetes in the US From 2016 to 2024. JAMA. 2026;186;(2):269-271. doi:10.1001/jamainternmed.2025.7055
- ¹³ Zhu H, Pan J, Pan H. Racial disparities in the prevalence and perinatal outcomes of gestational diabetes among women with normal body mass index. J Diabetes Investig. 2026;17(1):142-149. doi:10.1111/jdi.70195
- ¹⁴ Shah NS, Wang MC, Freaney PM, et al. Trends in Gestational Diabetes at First Live Birth by Race and Ethnicity in the US, 2011-2019. JAMA. 2021;326(7):660-669. doi:10.1001/jama.2021.7217
- ¹⁵ Lee H, Deshpande R, Benn EKT. Race, ethnicity, and other barriers to access dental care during pregnancy. J Racial Ethn Health Disparities. Published online April 26, 2024. doi: 10.1007/s40615-024-02001-4
- ¹⁶ Lee H, Marsteller JA, Wenzel J. Dental care utilization during pregnancy by Medicaid dental coverage in 26 states: pregnancy risk assessment monitoring system 2014–2015. J Public Health Dent. 2022;82(1):61–71
- ¹⁷ New York State Department of Health. New York State Pregnancy Risk Assessment Monitoring System Dashboard. Updated September 2025. Accessed May 21, 2026. health.ny.gov/pramsdashboard
- ¹⁸ PRAMS Data Methodology. Centers for Disease Control and Prevention. Updated May 15, 2024. Accessed December 12, 2025. cdc.gov/prams/php/methodology/index.html

Table 1. Prevalence of gestational diabetes by individual characteristics, NYS PRAMS 2016-2022

Characteristic	Respondents	Estimated # Affected	Prevalence	95% CI	P Value
Total	14,666	164,356	12.1%	11.4-12.8	
Race/Ethnicity*					<.0001
White, non-Hispanic	6,367	60,647	9.1%	8.2-10.1	
Black, non-Hispanic	2,411	20,862	11.6%	10.1-13.4	
Asian, non-Hispanic	1,849	33,411	23.6%	21.4-26.1	
Other, non-Hispanic	348	4,031	12.8%	8.7-18.2	
Hispanic	3,473	43,900	13.6%	12.2-15.2	
Age*					<.0001
Less than 25 years old	2,179	14,814	6.3%	5.1-7.8	
25-34 years old	8,340	94,479	12.0%	11.2-13.0	
35 years old or more	4,147	55,063	16.1%	14.7-17.7	
Education*					0.0006
Less than High School	1,841	28,308	15.5%	13.5-17.8	
High School Graduate	3,144	36,052	11.4%	10.1-12.9	
More than High School	9,593	98,637	11.6%	10.8-12.4	
Marital Status					0.9070
Married	9,318	101,889	12.1%	11.3-12.9	
Not Married	5,348	62,467	12.1%	11.0-13.4	
Medicaid Status*					0.0204
Enrolled in Medicaid	6,721	81,120	13.0%	12.0-14.0	
Not enrolled in Medicaid	7,934	82,236	11.4%	10.5-12.3	
Pregnancy Intention					0.1706
Intended	9,417	106,280	12.3%	11.5-13.2	
Unintended	3,006	31,690	11.1%	9.7-12.6	
Parity					0.0643
First-born baby	4,198	41,204	10.3%	9.1-11.6	
Not first-born baby	5,524	72,357	11.9%	10.8-13.0	
Pre-Pregnancy Body Mass Index					<.0001
Not Obese (<30.0)	11,191	102,619	10.0%	9.3-10.7	
Obese (30.0+)	3,437	60,867	18.4%	16.7-20.2	

* Indicates a significant difference ($p < 0.05$ for the chi-square test).

† The “Estimated Number Affected” is the population-based estimate of the number of pregnant individuals in the NYS population who would have gestational diabetes, incorporating sampling weights. Please see Methods for more details.