Trends and Characteristics in Gestational Diabetes: United States, 2016–2020
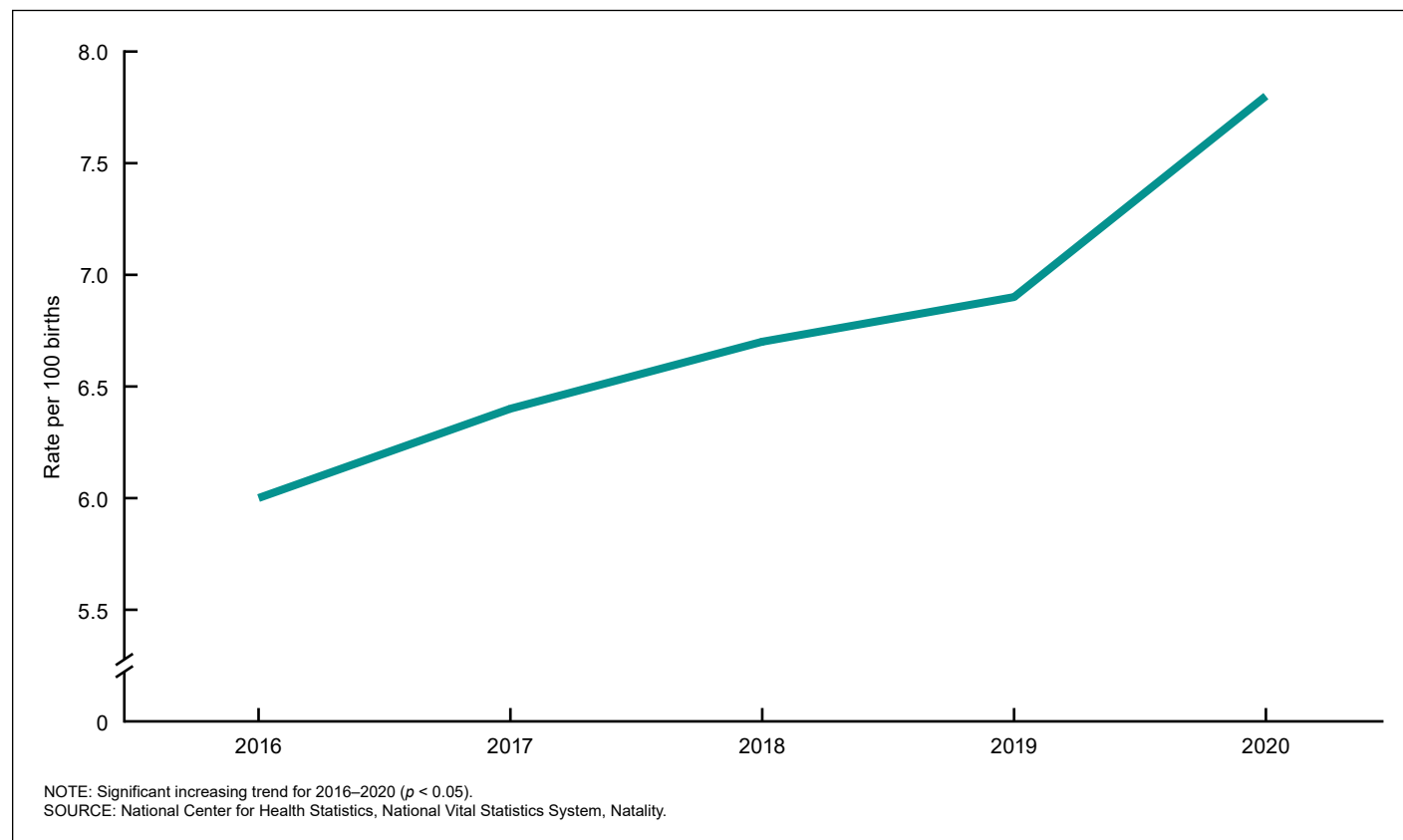
by Elizabeth C.W. Gregory, M.P.H., and Danielle M. Ely, Ph.D., Division of Vital Statistics

Abstract

Objectives—This report presents data on trends for gestational diabetes mellitus (GDM) among women giving birth in the United States from 2016 through 2020, and rates by selected maternal and newborn characteristics for 2016, 2019, and 2020.

Methods—Data are from birth certificates and are based on 100% of births registered in the United States for 2016 through 2020. Descriptive tabulations on trends in GDM rates from 2016 through 2020 and rates by maternal race and Hispanic origin, age, body mass index (BMI), state of residence, and plurality for 2016, 2019, and 2020 are presented.

Figure 1. Rate of gestational diabetes: United States, 2016–2020

NOTE: Significant increasing trend for 2016–2020 (*p* < 0.05).
SOURCE: National Center for Health Statistics, National Vital Statistics System, Natality.

Results—Among women giving birth in 2020, the overall rate of GDM was 7.8 per 100 births, an increase of 30% from 2016. Increases occurred from 2016 to 2020, with a larger annual percent change from 2019 to 2020 (13%) compared with the average annual percent change from 2016 to 2019 (5%) overall and for nearly every characteristic analyzed. In 2020, the rate of GDM varied by maternal race and Hispanic origin; among the six largest race and Hispanic-origin groups, the rate was highest for non-Hispanic Asian (14.9%) and lowest for non-Hispanic Black (6.5%) women. Variation in the GDM rate among the Asian, Native Hawaiian or Other Pacific Islander, and Hispanic subgroups was also seen. The GDM rate rose with increasing maternal age, prepregnancy BMI, and plurality. By state, for 2020, the GDM rate ranged from a low of 4.7% in Mississippi to a high of 12.6% in Alaska.

Keywords: GDM • race and Hispanic origin • births • National Vital Statistics System

Introduction

The 2003 revision of the U.S. Standard Certificate of Live Birth includes information on two types of diabetes (defined as glucose intolerance requiring treatment), prepregnancy (diagnosis of diabetes before pregnancy) and gestational (diagnosis of diabetes during pregnancy) (1–3). Differentiating between the two types of diabetes is important because, although both are established risk factors for several adverse maternal and infant health outcomes, the conditions occur at different frequencies and have different impacts on pregnancy outcomes (4–9). The focus of this report is on gestational diabetes mellitus (GDM), which is specific to pregnancy and occurs more frequently than prepregnancy diabetes (10–12).

GDM is a common complication in pregnancy (8,13), affecting about 2%–10% of pregnancies in the United States annually (10,11,14). The presence of GDM can lead to negative health outcomes for both mothers and infants. Adverse health outcomes for the mother include an increased risk of developing cardiovascular disease and type 2 diabetes later in life, GDM in subsequent pregnancies, maternal hypertensive disorders, and having a cesarean delivery (5,8,10,15–19). Adverse health outcomes for the infant include an increased risk of preterm birth and macrosomia, and the development of type 2 diabetes later in life (5,8,17–19). Studies have found increasing GDM rates over time in both the United States and internationally (9,12,20–24), and a larger increase in GDM during the COVID-19 pandemic compared with prepandemic times (25–27).

National information on GDM became available for the first time in 2016. This report presents overall trends in GDM among women giving birth in the United States from 2016 through 2020 and rates of GDM by maternal race and Hispanic origin, age, body mass index (BMI), state of residence, and plurality for 2016, 2019, and 2020.

Methods

This analysis uses data from the birth certificate and is based on 100% of births registered in the United States for 2016 through 2020. Trend analysis was performed using 2016–2020 data and a more detailed analysis was conducted on 2020 data. Comparisons are made between 2016 and 2019, 2019 and 2020, and 2016 and 2020 for the overall GDM rate and all other characteristics. These time periods were selected to examine the full time period for which final national GDM data are currently available (2016–2020) and to examine changes in GDM before (2016–2019) and during (2020) the COVID-19 pandemic.

The GDM item was added to the birth certificate with the 2003 revision and was reported by all states as of 2016. Birth certificate data on GDM is recommended to be collected from the mother's medical records (1). Mothers are to be reported as having GDM if there is a diagnosis of glucose intolerance requiring treatment during this pregnancy in her medical record (2). Of the 3,613,647 births registered in the United States for 2020, 4,063, or 0.1%, were missing GDM information. Data on BMI were missing for 1.9% (70,408) of births and data on Hispanic origin were missing for 0.9% (33,946) of births. Births with missing values for race (251,440 or 7.0%), age (300 or 0.01%), and plurality (95 or 0.003%) were imputed. Records missing information on GDM, BMI, and Hispanic origin were excluded from analyses.

Race and Hispanic origin are reported separately on the birth certificate and are self-reported by the mother. All race and Hispanic-origin groups are based on single-race reporting and are consistent with the 1997 Office of Management and Budget standards (28). Maternal race and Hispanic-origin categories presented are non-Hispanic White, non-Hispanic Black, non-Hispanic American Indian or Alaska Native (AIAN), non-Hispanic Asian, non-Hispanic Native Hawaiian or Other Pacific Islander (NHOPI), and Hispanic. Data on non-Hispanic Asian (Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese, and Other Asian), NHOPI (Hawaiian, Guamanian, Samoan, and Other Pacific Islander), and Hispanic (Mexican, Puerto Rican, Cuban, Dominican, Central or South American, and Other and unknown Hispanic) subgroups are also shown.

Maternal prepregnancy BMI is calculated from prepregnancy weight and height according to the following formula (29):

$$\frac{mother's\ prepregnancy\ weight\ (lb)}{mother's\ height\ (in)^2} \bullet 703$$

The National Center for Health Statistics (NCHS) provides a calculated categorization of maternal prepregnancy BMI that aligns with that established by the National Heart, Lung, and Blood Institute (30) for all adults. Categories are:

- Underweight is BMI less than 18.5
- Normal weight is BMI of 18.5 to 24.9
- Overweight is BMI of 25.0 to 29.9
- Obese is BMI of 30.0 and over.

Plurality is defined as the number of fetuses delivered live or dead at any time in the pregnancy regardless of gestational age, or if the fetuses were delivered at different dates in the pregnancy

(2). Plurality is classified as singleton, twin, and triplet and higher-order births.

GDM rates are expressed as the number of live births to women with GDM per 100 live births. All statements about differences in rates in the text have been tested for statistical significance, and statements that a given rate is higher or lower than another rate indicate that the rates are significantly different using a two-tailed z test at the alpha level of 0.05 (31).

References to decreasing or increasing trends in rates (for example, trends in rates for 2016–2020) are statistically significant at the 0.05 level and were assessed using the Cochran-Armitage test for trends, a modified chi-squared test.

Comparisons between state rates and the U.S. rate account for the individual state's contribution to the U.S. rate. Therefore, each state rate is compared with a unique U.S. rate, independent of the state's contribution to the total U.S. rate.

The reliability of percentages was evaluated based on standards developed by NCHS. For detailed information on the standards, see "National Center for Health Statistics Data Presentation Standards for Proportions" (32).
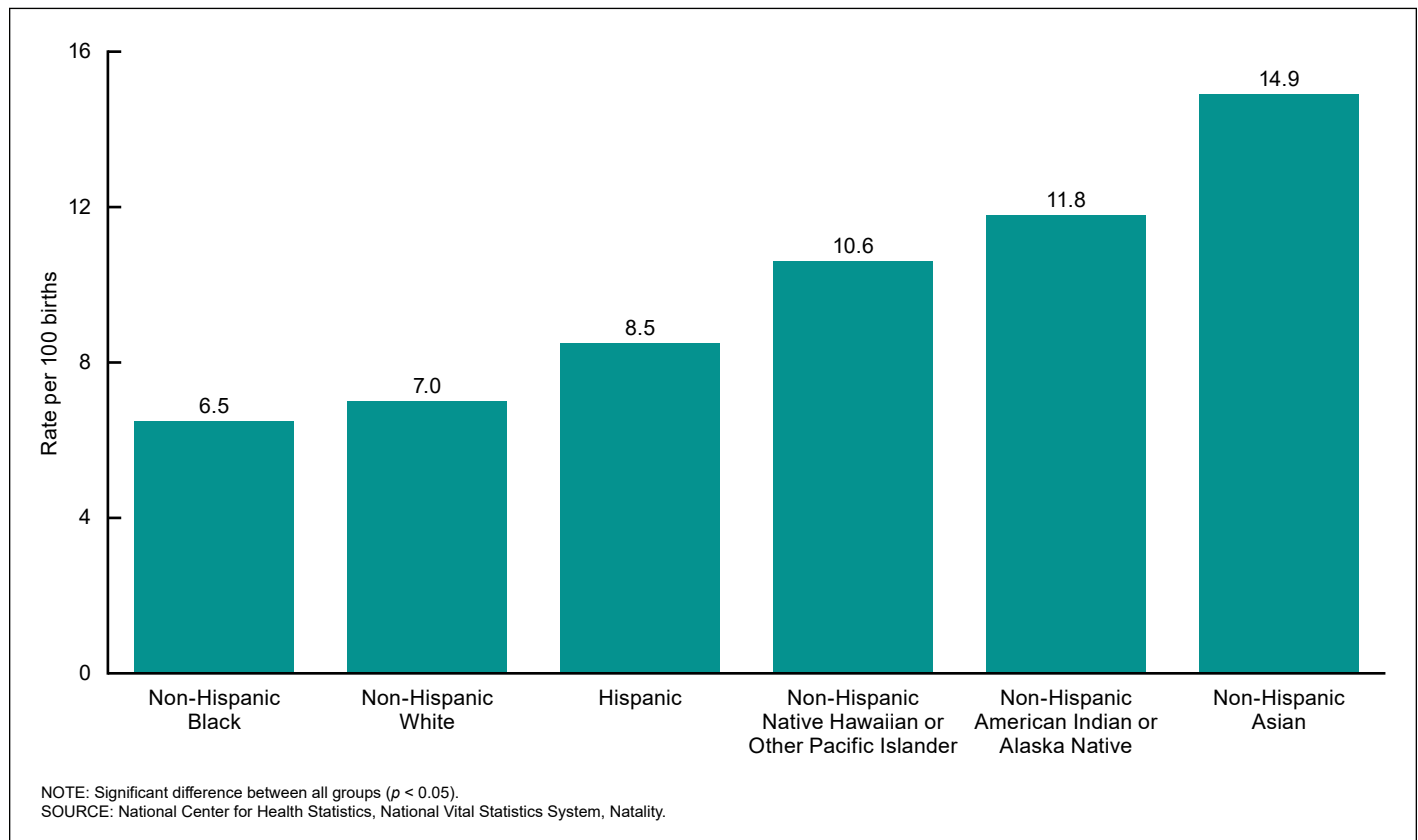
Results

Overall trends

- The number of GDM cases increased 20% from 2016 (234,847) to 2020 (281,789) (Table 1).

- The number of GDM cases rose by an average of 3% annually from 2016 to 2019 and then rose 9% from 2019 to 2020.
- The GDM rate increased 30% from 2016 (6.0%) to 2020 (7.8%) (Table 1 and Figure 1).
- The GDM rate rose by an average of 5% annually from 2016 to 2019 and then rose 13% from 2019 to 2020.

Trends and differences by maternal race and Hispanic origin

- In 2020, among the six largest race and Hispanic-origin groups, the rate of GDM was lowest for non-Hispanic Black women (6.5%), followed by non-Hispanic White (7.0%), Hispanic (8.5%), non-Hispanic NHOPI (10.6%), non-Hispanic AIAN (11.8%), and non-Hispanic Asian (14.9%) women (Table 2 and Figure 2).
- Among non-Hispanic Asian subgroups, the GDM rate was highest for Asian Indian women (16.7%), followed by Vietnamese and Filipino (15.2% for each), Chinese (13.5%), Korean (11.7%), and Japanese (9.3%) women.
- Among non-Hispanic NHOPI subgroups, the GDM rate was highest for Guamanian (13.8%) and Samoan (12.3%) women and lowest for Hawaiian women (8.4%).
- Among the Hispanic-origin subgroups, the GDM rate was highest for Mexican women (8.9%), followed by Dominican (8.5%) and Puerto Rican (8.4%), Cuban (7.9%), and Central and South American (7.5%) women.

Figure 2. Rate of gestational diabetes, by race and Hispanic origin of mother: United States, 2020

NOTE: Significant difference between all groups ($p < 0.05$).
SOURCE: National Center for Health Statistics, National Vital Statistics System, Natality.

- From 2016 to 2020, the GDM rate increased for all but one of the race and Hispanic-origin groups studied. Rates rose from 26% (NHOPI) to 35% (non-Hispanic Black) among the six largest groups, by 28% (Asian Indian and Vietnamese) to 48% (Korean) among the Asian subgroups, and by 21% (Central and South American) to 55% (Cuban) among the Hispanic subgroups. Among the NHOPI subgroups, rates increased from 25% (Hawaiian) to 38% (Samoan); the increase for Hawaiian women was not significant (Table 2).
- GDM rates rose by 8%–31% from 2019 to 2020 for each of the race and Hispanic-origin groups except the Hawaiian subgroup. In comparison, for 2016–2019, GDM rates rose an average of 2%–13% per year for each group except for NHOPI women overall and each NHOPI subgroup.

Trends and differences by maternal age

- In 2020, the GDM rate increased with increasing age of the mother, from 2.5% for women under age 20 to 15.3% for those aged 40 and over (Table 3 and Figure 3).
- From 2016 to 2020, the GDM rate increased for each maternal age group, ranging from 20% (for mothers aged 40 and over) to 36% (for those aged 20–24).
- GDM rates rose for each age group from 2019 to 2020, with increases ranging from 9% to 18%. In comparison, from 2016 to 2019, an average annual percentage increase of 3%–5% in GDM rates was seen for each age group.

Trends and differences by maternal BMI

- In 2020, the GDM rate increased with increasing maternal BMI, from 3.7% for underweight women, to 4.6% for those who were normal weight, to 7.6% for those who were overweight, to 12.6% for those with obesity (Table 3 and Figure 4).
- From 2016 to 2020, the GDM rate increased for each BMI category, from 21% for women with obesity to 28% for women who were underweight or normal weight.
- GDM rates rose by 11%–12% from 2019 to 2020 for each BMI category. In comparison, from 2016 to 2019, an average annual percentage increase of 3%–5% in GDM rates was seen for each BMI category.

Trends and differences by plurality

- In 2020, the GDM rate increased with increasing plurality, from 7.7% among mothers having a singleton birth, to 9.8% for mothers of twins, to 13.6% for mothers of triplet and higher-order multiple births (Table 3).
- From 2016 to 2020, the GDM rate increased for women having singletons (31%), twins (23%), and triplet and higher-order multiple births (40%).
- GDM rates increased from 2019 to 2020 among mothers of singletons (13%), twins (9%), and triplet and higher-order multiple births (26%). In comparison, for 2016–2019, the

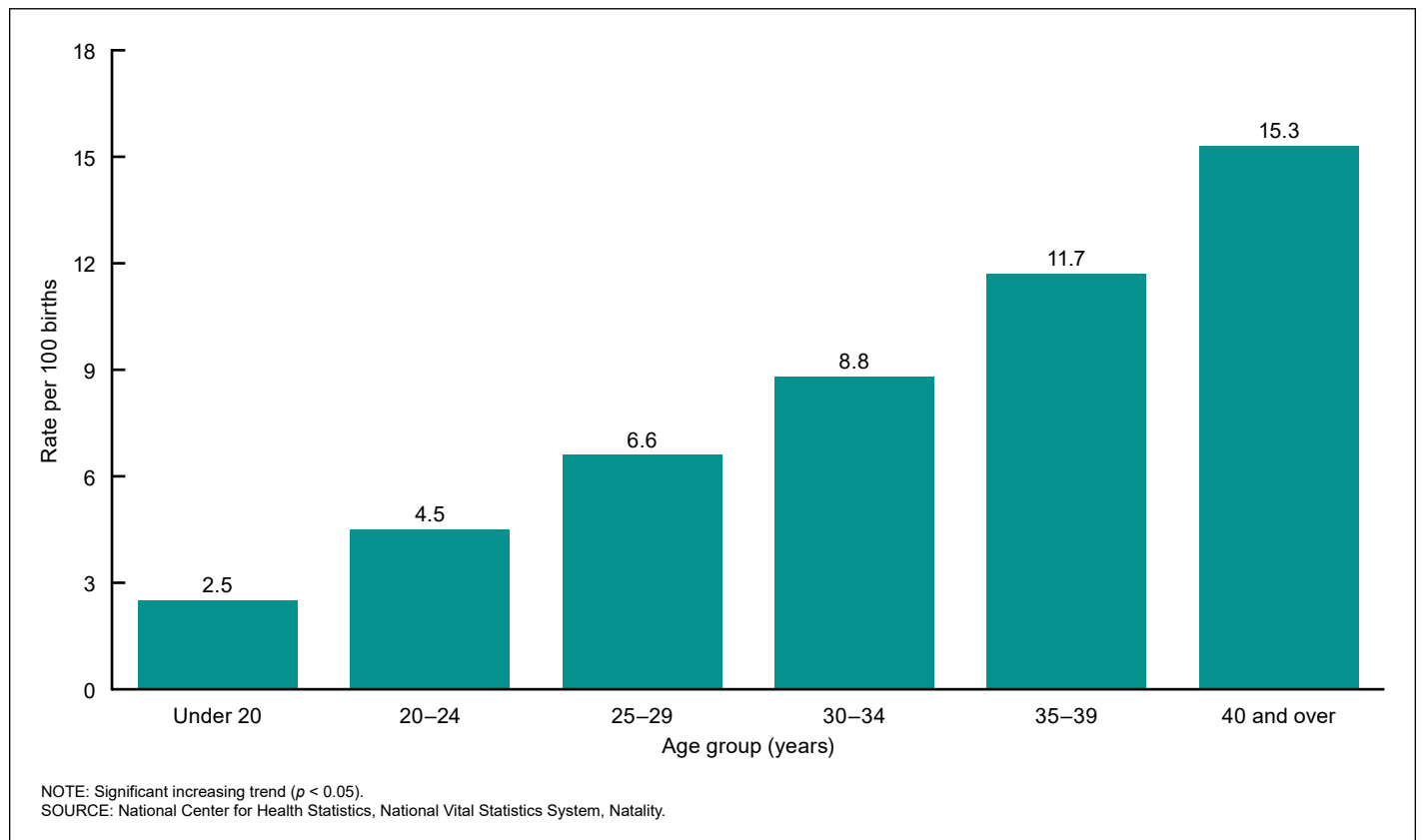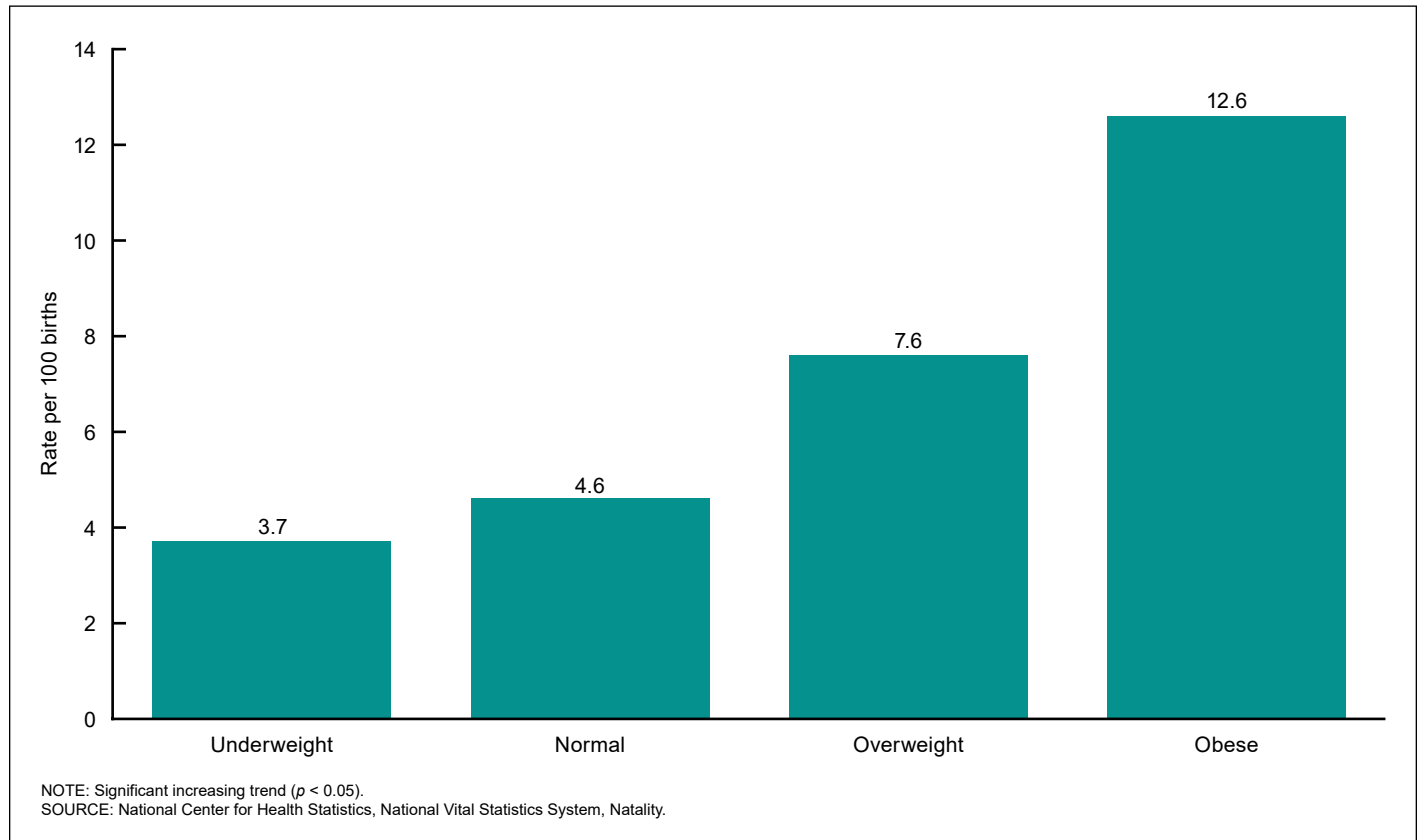**Figure 3. Rate of gestational diabetes, by age of mother: United States, 2020**

NOTE: Significant increasing trend ($p < 0.05$).
SOURCE: National Center for Health Statistics, National Vital Statistics System, Natality.

Figure 4. Rate of gestational diabetes, by body mass index: United States, 2020

NOTE: Significant increasing trend ($p < 0.05$).
SOURCE: National Center for Health Statistics, National Vital Statistics System, Natality.

average annual percentage increase was 5% for mothers of singletons and 4% for mothers of twins. The increase for mothers of triplets and higher-order multiple births was not significant.

Trends and differences by state of residence

- In 2020, the GDM rate ranged from a low of 4.7% in Mississippi to a high of 12.6% in Alaska (Table 4 and Figure 5).
- Compared with the U.S. rate of 7.8%, the GDM rate was lower in 23 states and the District of Columbia (D.C.), higher in 21 states, and not significantly different in 6 states.
- From 2016 to 2020, the GDM rate increased in 48 states and D.C. Increases ranged from 14% in Connecticut, New Mexico, and South Carolina to 56% in Wyoming. Increases in the remaining two states (North Dakota and West Virginia) were not significant (Table 4 and Figure 6).
- Increases of 5%–61% were observed for 46 states and D.C. from 2019 to 2020. Increases for the remaining four states (Connecticut, North Dakota, South Dakota, and Wyoming) were not significant. In comparison, from 2016 to 2019, the average annual percent change ranged from -7% to 17% for 45 states and D.C. Changes for the remaining five states were not significant.

Discussion

This report found that the overall GDM rate was 7.8% in 2020, an increase of 13% from 2019 (6.9%) and 30% from 2016 (6.0%). A larger annual percent change from 2019 to 2020 (13%) than from 2016 to 2019 (average annual increase of 5%) was observed. From 2016 to 2020, GDM rates increased for every category of all characteristics analyzed, though increases for the Hawaiian subgroup and two states were not significant. Rates also increased between 2019 and 2020 for nearly all groups. The annual percent change from 2019 to 2020 was larger than the average annual percent change from 2016 to 2019 for nearly all categories of all characteristics analyzed, except changes for Hawaiian and Cuban women and nine states.

In 2020, variation in the GDM rate was observed across race and Hispanic-origin groups and subgroups. Among the six largest race and Hispanic-origin groups, the rate for the group with the highest rate (non-Hispanic Asian women) was more than double the rate for the group with the lowest rate (non-Hispanic Black women). Among the Hispanic subgroups, rates were lowest for Central and South American women and highest for Mexican women. Among the Asian subgroups, the lowest rate was observed for Japanese women and the highest for Asian Indian women. For the NHOPI subgroup, the lowest rate was observed for Hawaiian women and the highest for Guamanian and Samoan women. The GDM rate rose with increasing age, BMI, and plurality. By state of residence, Alaska had the highest GDM rate, more than two and one-half times higher than that for Mississippi, which had the lowest rate.

Figure 5. Rate of gestational diabetes, by state of residence: United States, 2020

SOURCE: National Center for Health Statistics, National Vital Statistics System, Natality.
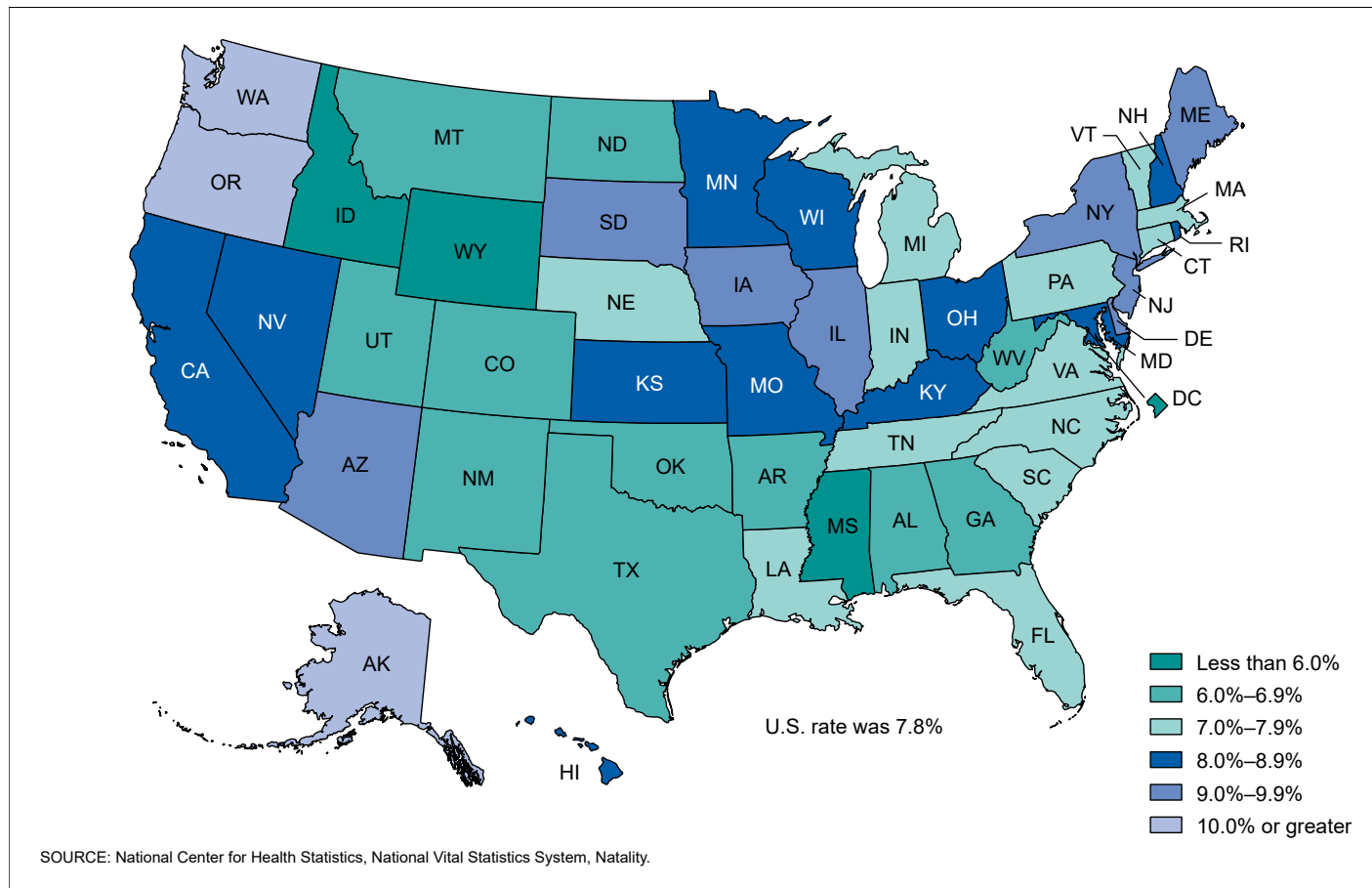
These findings are generally consistent with the findings of other studies, though some disagreement exists in the literature as to whether rates are lowest for non-Hispanic Black or non-Hispanic White women (5,10,17,33–42). Recent studies have also observed larger increases in GDM during the COVID-19 pandemic compared with prepandemic times (25–27). The larger than average increase in GDM during 2019–2020 may be related, in part, to changes observed in the general and at-risk populations (including pregnant women), such as decreased physical activity, weight gain, and other lifestyle factors that are known to impact GDM (43–48).

Limitations

Underreporting of health conditions is considered a primary limitation of birth certificate data (49–50). Two studies that examined data from the 2003 birth certificate revision for three vital statistics reporting areas found low levels of sensitivity (a measure of underreporting) for GDM across all three reporting areas, ranging from 57.7% to 59.6% (51,52). However, the Kappa scores (a more conservative measure of agreement) were found to be moderate to substantial, ranging from 0.55 to 0.68 (51,52).

Conclusion

GDM is a common complication in pregnancy that can lead to negative health outcomes for both mothers and infants. A primary advantage of birth certificate data is that information is collected on all women giving birth in the United States each year, allowing for analysis of both national trends and trends for smaller population groups, such as Native Hawaiian and Other Pacific Islander subgroups. Despite concerns with potential reporting issues, trends and patterns in the GDM rate shown in this report are generally consistent with those of other studies and these data provide opportunities to examine GDM among a large population of women giving birth in the United States.

References

1. Facility Worksheet for the Live Birth Certificate. 2016. Available from: https://www.cdc.gov/nchs/data/dvs/facility-worksheet-2016-508.pdf.
2. National Center for Health Statistics. Guide to completing the facility worksheets for the Certificate of Live Birth and Report of Fetal Death (2003 revision). 2019. Available from: https://www.cdc.gov/nchs/data/dvs/GuidetoCompleteFacilityWks.pdf.
3. U.S. Standard Certificate of Live Birth. 2003. Available from: https://www.cdc.gov/nchs/data/dvs/birth11-03final-ACC.pdf.

Figure 6. Percent change in the rate of gestational diabetes between 2016 and 2020, by state of residence

SOURCE: National Center for Health Statistics, National Vital Statistics System, Natality.
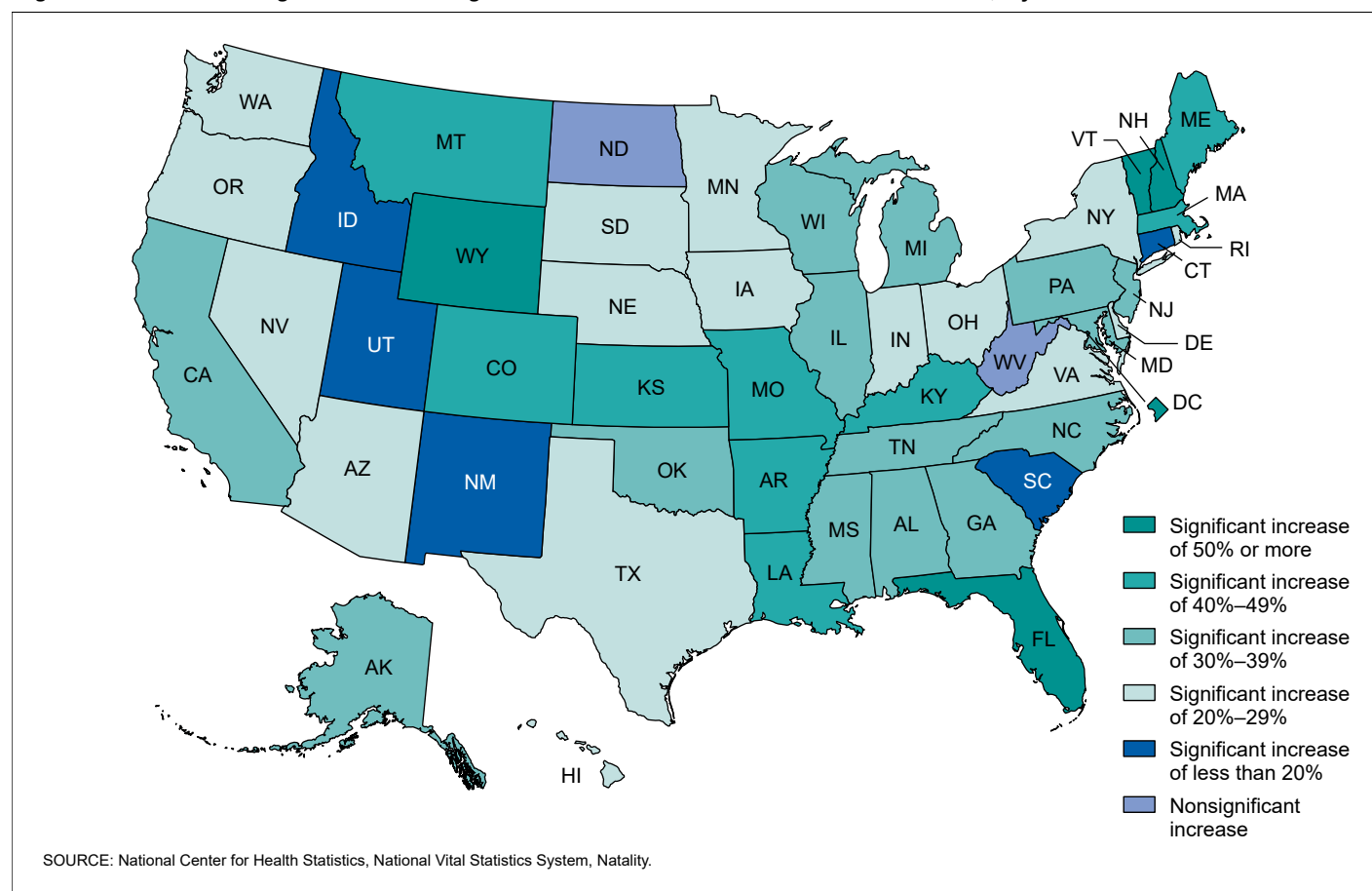
4.   March of Dimes. Preexisting diabetes. 2019. Available from: https://www.marchofdimes.org/complications/preexisting-diabetes.aspx.

5.   March of Dimes. Gestational diabetes. 2022. Available from: https://www.marchofdimes.org/complications/gestational-diabetes.aspx.

6.   March of Dimes. Diabetes during pregnancy: A risk factor premature birth. 2017. Available from: https://newsmomsneed.marchofdimes.org/pregnancy/diabetes-during-pregnancy-a-risk-factor-for-preterm-labor-and-premature-birth/.

7.   Ray JG, Vermeulen MJ, Shapiro JL, Kenshole AB. Maternal and neonatal outcomes in pregestational and gestational diabetes mellitus, and the influence of maternal obesity and weight gain: The DEPOSIT study. QJM 94(7):347–56. 2001.

8.   Rosenberg TJ, Garbers S, Lipkind H, Chiasson MA. Maternal obesity and diabetes as risk factors for adverse pregnancy outcomes: Differences among 4 racial/ethnic groups. Am J Public Health 95(9):1545–51. 2005.

9.   Deputy NP, Kim SY, Conrey EJ, Bullard KM. Prevalence and changes in preexisting diabetes and gestational diabetes among women who had a live birth—United States, 2012–2016. MMWR Morb Mortal Wkly Rep 67(43):1201–7. 2018.

10.   Centers for Disease Control and Prevention. Gestational diabetes. 2021. Available from: https://www.cdc.gov/diabetes/basics/gestational.html.

11.   Osterman MJK, Hamilton BE, Martin JA, Driscoll AK, Valenzuela CP. Births: Final data for 2020. National Vital Statistics Reports; vol 70 no 17. Hyattsville, MD: National Center for Health Statistics. 2022. DOI: https://dx.doi.org/10.15620/cdc:112078.

12.   Centers for Disease Control and Prevention. Diabetes during pregnancy. 2018. Available from: https://www.cdc.gov/reproductivehealth/maternalinfanthealth/diabetes-during-pregnancy.htm.

13.   Bardenheier BH, Imperatore G, Gilboa SM, Geiss LS, Saydah SH, Devlin HM, et al. Trends in gestational diabetes among hospital deliveries in 19 U.S. states, 2000–2010. Am J Prev Med 49(1):12–9. 2015.

14.   U.S. Preventive Services Task Force. Gestational diabetes: Screening. 2021. Available from: https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/gestational-diabetes-screening.

15.   Lee AJ, Hiscock RJ, Wein P, Walker SP, Permezel M. Gestational diabetes mellitus: Clinical predictors and long-term risk of developing type 2 diabetes: A retrospective cohort study using survival analysis. Diabetes Care 30(4):878–83. 2007.

16. Serlin DC, Lash RW. Diagnosis and management of gestational diabetes mellitus. Am Fam Physician 80(1):57–62. 2009.

17. Hunsberger M, Rosenberg KD, Donatelle RJ. Racial/ethnic disparities in gestational diabetes mellitus: Findings from a population-based survey. Womens Health Issues 20(5):323–8. 2010.

18. American Diabetes Association. Gestational diabetes mellitus. Diabetes Care 27(Suppl 1):S88–90. 2004.

19. Lavery JA, Friedman AM, Keyes KM, Wright JD, Ananth CV. Gestational diabetes in the United States: Temporal changes in prevalence rates between 1979 and 2010. BJOG 124(5):804–13. 2017.

20. Zhou T, Sun D, Li X, Heianza H, Nisa H, Hu G, et al. Prevalence and trends in gestational diabetes mellitus among women in the United States, 2006–2016. Diabetes 67(Suppl 1):121–OR. 2018.

21. Su FL, Lu MC, Yu SC, Yang CP, Yang CC, Tseng ST, Yan YH. Increasing trend in the prevalence of gestational diabetes mellitus in Taiwan. J Diabetes Investig 12(11):2080–8. 2021.

22. Zhu Y, Zhang C. Prevalence of gestational diabetes and risk of progression to type 2 diabetes: A global perspective. Curr Diab Rep 16(1):7. 2016.

23. Ferrara A. Increasing prevalence of gestational diabetes mellitus: A public health perspective. Diabetes Care 30(Suppl 2):S141–6. 2007.

24. Ovesen PG, Fuglsang J, Andersen MB, Wolff C, Petersen OB, McIntyre HD. Temporal trends in gestational diabetes prevalence, treatment, and outcomes at Aarhus University Hospital, Skejby, between 2004 and 2016. J Diabetes Res 5937059. 2018.

25. Sun S, Savitz DA, Wellenius GA. Changes in adverse pregnancy outcomes associated with the COVID-19 pandemic in the United States. JAMA Netw Open 4(10):e2129560. 2021.

26. Cauldwell M, van-de-L'Isle Y, Watt Coote I, Steer PJ. Seasonal and SARS-CoV-2 pandemic changes in the incidence of gestational diabetes. BJOG 128(11):1881–7. 2021.

27. Zanardo V, Tortora D, Sandri A, Severino L, Mesirca P, Straface G. COVID-19 pandemic: Impact on gestational diabetes mellitus prevalence. Diabetes Res Clin Pract 183:109149. 2022.

28. Office of Management and Budget. Revisions to the standards for the classification of federal data on race and ethnicity. Fed Regist 62(210):58782–90. 1997.

29. National Center for Health Statistics. User guide to the 2020 natality public use file. Available from: https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Dataset_Documentation/DVS/natality/UserGuide2020.pdf.

30. National Heart, Lung, and Blood Institute Obesity Education Initiative Expert Panel on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults. Clinical guidelines on the identification, evaluation, and treatment of obesity in adults: The evidence report. Bethesda, MD: National Institutes of Health. 1998.

31. National Center for Health Statistics. User guide to the 2010 natality public use file. Available from: https://ftp.cdc.gov/pub/Health_Statistics/NCHS/Dataset_Documentation/DVS/natality/UserGuide2010.pdf.

32. Parker JD, Talih M, Malec DJ, Beresovsky V, Carroll M, Gonzalez JF Jr, et al. National Center for Health Statistics data presentation standards for proportions. National Center for Health Statistics. Vital Health Stat 2(175). 2017. Available from: https://www.cdc.gov/nchs/data/series/sr_02/sr02_175.pdf.

33. Savitz DA, Janevic TM, Engel SM, Kaufman JS, Herring AH. Ethnicity and gestational diabetes in New York City, 1995–2003. BJOG 115(8):969–78. 2008.

34. Pu J, Zhao B, Wang EJ, Nimbal V, Osmundson S, Kunz L, et al. Racial/ethnic differences in gestational diabetes prevalence and contribution of common risk factors. Paediatr Perinat Epidemiol 29(5):436–43. 2015.

35. Li Y, Ren X, He L, Li J, Zhang S, Chen W. Maternal age and the risk of gestational diabetes mellitus: A systematic review and meta-analysis of over 120 million participants. Diabetes Res Clin Pract 162:108044. 2020.

36. Chu SY, Abe K, Hall LR, Kim SY, Njoroge T, Qin C. Gestational diabetes mellitus: All Asians are not alike. Prev Med 49 (2–3):265–8. 2009.

37. March of Dimes. Being pregnant with twins, triplets and other multiples. 2015. Available from: https://www.marchofdimes.org/multiples-twins-triplets-and-beyond.aspx.

38. Hager M, Ott J, Castillo DM, Springer S, Seemann R, Pils S. Prevalence of gestational diabetes in triplet pregnancies: A retrospective cohort study and meta-analysis. J Clin Med 9(5):1523. 2020. DOI:10.3390/jcm9051523.

39. Chu SY, Callaghan WM, Kim SY, Schmid CH, Lau J, England LJ, Dietz PM. Maternal obesity and risk of gestational diabetes mellitus. Diabetes Care 30(8):2070–6. 2007.

40. Torloni MR, Betrán AP, Horta BL, Nakamura MU, Atallah AN, Moron AF, Valente O. Prepregnancy BMI and the risk of gestational diabetes: A systematic review of the literature with meta-analysis. Obes Rev 10(2):194–203. 2009.

41. Bardenheier BH, Elixhauser A, Imperatore G, Devlin HM, Kuklina EV, Geiss LS, Correa A. Variation in prevalence of gestational diabetes mellitus among hospital discharges for obstetric delivery across 23 states in the United States. Diabetes Care 36(5):1209–14. 2013.

42. Shah NS, Wang MC, Freaney PM, Perak AM, Carnethon MR, Kandula NR, et al. Trends in gestational diabetes at first live birth by race and ethnicity in the US, 2011–2019. JAMA 326(7):660–9. 2021.

43. Whitaker KM, Hung P, Alberg AJ, Hair NL, Liu J. Variations in health behaviors among pregnant women during the COVID-19 pandemic. Midwifery 95:102929. 2021.

44. Ashby NJS. Impact of the COVID-19 pandemic on unhealthy eating in populations with obesity. Obesity (Silver Spring) 28(10):1802–5. 2020.

45. Dunton GF, Wang SD, Do B, Courtney J. Early effects of the COVID-19 pandemic on physical activity locations and behaviors in adults living in the United States. Prev Med Rep 20:101241. 2020.

46. Bhutani S, vanDellen MR, Cooper JA. Longitudinal weight gain and related risk behaviors during the COVID-19 pandemic in adults in the US. Nutrients 13(2):671. 2021.

47. Mayo Clinic. Gestational diabetes. 2020. Available from: https://www.mayoclinic.org/diseases-conditions/gestational-diabetes/symptoms-causes/syc-20355339.

48. The American College of Obstetricians and Gynecologists. Gestational diabetes. 2020. Available from: https://www.acog.org/womens-health/faqs/gestational-diabetes.

49. DiGuiseppe DL, Aron DC, Ranbom L, Harper DL, Rosenthal GE. Reliability of birth certificate data: A multi-hospital comparison to medical records information. Matern Child Health J 6(3):169–79. 2002.

50. Roohan PJ, Josberger RE, Acar J, Dabir P, Feder HM, Gagliano PJ. Validation of birth certificate data in New York State. J Community Health 28(5):335–46. 2003.

51. Martin JA, Wilson EC, Osterman MJK, Saadi EW, Sutton SR, Hamilton BE. Assessing the quality of medical and health data from the 2003 birth certificate revision: Results from two states. National Vital Statistics Reports; vol 62 no 2. Hyattsville, MD: National Center for Health Statistics. 2013.

52. Gregory ECW, Martin JA, Argov EL, Osterman MJK. Assessing the quality of medical and health data from the 2003 birth certificate revision: Results from New York City. National Vital Statistics Reports; vol 68 no 8. Hyattsville, MD: National Center for Health Statistics. 2019.

List of Detailed Tables

Table 1. Number of cases and rate of gestational diabetes: United States, 2016–2020

[Rates are number of births to women with gestational diabetes per 100 births]

Year[1]	Total births	Number of cases of gestational diabetes	Rate (95% confidence interval)	Not stated[2]
2020.	3,613,647	281,789	7.8 (7.8–7.8)	4,063
2019.	3,747,540	258,676	6.9 (6.9–6.9)	3,284
2018.	3,791,712	252,522	6.7 (6.6–6.7)	2,882
2017.	3,855,500	244,716	6.4 (6.3–6.4)	3,711
2016.	3,945,875	234,847	6.0 (5.9–6.0)	3,781

[1]Significant increasing trend for 2016–2020 ($p < 0.05$).
[2]No response reported for the "risk factors in this pregnancy" item on the birth certificate.

SOURCE: National Center for Health Statistics, National Vital Statistics System, Natality.

Table 2. Number of cases and rate of gestational diabetes, by race and Hispanic origin of mother: United States, 2016, 2019, and 2020

[Rates are number of births to women with gestational diabetes per 100 births in specified group]

Characteristic	Number of births			Number of cases of gestational diabetes			Rate (95% confidence interval)			Percent change			Not stated[1]		
	2016	2019	2020	2016	2019	2020	2016	2019	2020	2016–2019	2019–2020	2016–2020	2016	2019	2020
All races and origins[2]	3,945,875	3,747,540	3,613,647	234,847	258,676	281,789	6.0 (5.9–6.0)	6.9 (6.9–6.9)	7.8 (7.8–7.8)	†15	†13	†30	3,781	3,284	4,063
Non-Hispanic, single race[3]:															
White	2,056,332	1,915,912	1,843,432	108,884	119,671	128,730	5.3 (5.3–5.3)	6.3 (6.2–6.3)	7.0 (7.0–7.0)	†19	†11	†32	1,895	1,465	1,800
Black..............	558,622	548,075	529,811	26,842	29,533	34,253	4.8 (4.8–4.9)	5.4 (5.3–5.5)	6.5 (6.4–6.5)	†13	†20	†35	578	459	493
American Indian or Alaska Native	31,452	28,450	26,813	2,875	2,961	3,143	9.2 (8.8–9.5)	10.4 (10.1–10.8)	11.8 (11.4–12.1)	†13	†13	†28	77	43	66
Asian	254,471	238,769	219,068	28,270	31,784	32,627	11.1 (11.0–11.2)	13.3 (13.2–13.5)	14.9 (14.8–15.1)	†20	†12	†34	145	87	168
Asian Indian	74,051	71,450	67,861	9,633	10,969	11,343	13.0 (12.8–13.3)	15.4 (15.1–15.6)	16.7 (16.4–17.0)	†18	†8	†28	43	18	48
Chinese..........	62,670	54,767	42,208	6,227	6,460	5,675	9.9 (9.7–10.2)	11.8 (11.5–12.1)	13.5 (13.1–13.8)	†19	†14	†36	29	25	23
Filipino	30,173	27,978	27,275	3,395	3,836	4,129	11.3 (10.9–11.6)	13.7 (13.3–14.1)	15.2 (14.7–15.6)	†21	†11	†35	18	8	22
Japanese.........	6,625	5,568	5,138	451	429	479	6.8 (6.2–7.4)	7.7 (7.0–8.4)	9.3 (8.5–10.1)	†13	†21	†37	6	2	6
Korean	15,020	12,995	12,301	1,182	1,324	1,438	7.9 (7.4–8.3)	10.2 (9.7–10.7)	11.7 (11.1–12.3)	†29	†15	†48	6	7	9
Vietnamese.......	20,124	20,113	18,852	2,400	2,843	2,859	11.9 (11.5–12.4)	14.1 (13.7–14.6)	15.2 (14.7–15.7)	†18	†8	†28	11	8	12
Other Asian	45,808	45,898	45,433	4,982	5,923	6,704	10.9 (10.6–11.2)	12.9 (12.6–13.2)	14.8 (14.4–15.1)	†18	†15	†36	32	19	48
Native Hawaiian or Other Pacific Islander	9,342	9,770	9,626	785	880	1,015	8.4 (7.8–9.0)	9.0 (8.4–9.6)	10.6 (9.9–11.2)	7	†18	†26	5	7	14
Hawaiian.........	823	853	810	55	76	68	6.7 (5.0–8.4)	8.9 (7.0–10.8)	8.4 (6.5–10.3)	33	-6	25	–	–	–
Guamanian	919	845	895	95	89	123	10.3 (8.4–12.3)	10.5 (8.5–12.6)	13.8 (11.5–16.1)	2	†31	†34	–	–	4
Samoan..........	2,126	2,063	2,061	190	210	253	8.9 (7.7–10.2)	10.2 (8.9–11.5)	12.3 (10.9–13.7)	15	†21	†38	3	1	2
Other Pacific Islander.........	5,474	6,009	5,860	445	505	571	8.1 (7.4–8.9)	8.4 (7.7–9.1)	9.8 (9.0–10.5)	4	†17	†21	2	6	8
Hispanic[4]	918,447	886,467	866,713	60,192	65,806	73,393	6.6 (6.5–6.6)	7.4 (7.4–7.5)	8.5 (8.4–8.5)	†12	†15	†29	625	584	692
Mexican	535,993	496,716	480,531	37,616	39,552	42,947	7.0 (7.0–7.1)	8.0 (7.9–8.0)	8.9 (8.9–9.0)	†14	†11	†27	216	248	380
Puerto Rican........	70,517	70,950	69,763	4,257	5,100	5,848	6.1 (5.9–6.2)	7.2 (7.0–7.4)	8.4 (8.2–8.6)	†18	†17	†38	154	61	55
Cuban.............	22,573	23,668	23,188	1,150	1,684	1,834	5.1 (4.8–5.4)	7.1 (6.8–7.4)	7.9 (7.6–8.3)	†39	†11	†55	22	11	25
Dominican	31,358	32,483	31,596	1,905	2,207	2,680	6.1 (5.8–6.3)	6.8 (6.5–7.1)	8.5 (8.2–8.8)	†11	†25	†39	42	24	15
Central or South American	143,983	165,229	169,811	8,942	10,668	12,723	6.2 (6.1–6.3)	6.5 (6.3–6.6)	7.5 (7.4–7.6)	†5	†15	†21	158	121	133
Other and unknown..........	114,023	97,421	91,824	6,322	6,595	7,361	5.5 (5.4–5.7)	6.8 (6.6–6.9)	8.0 (7.8–8.2)	†24	†18	†45	33	119	84

† Significant change (*p* < 0.05).
– Quantity zero.
[1]No response reported for the "risk factors in this pregnancy" item on the birth certificate.
[2]Includes other races not shown and origin not stated.
[3]Race and Hispanic origin are reported separately on birth certificates; persons of Hispanic origin may be of any race. In this table, non-Hispanic women are classified by race. Race categories are consistent with the 1997 Office of Management and Budget standards. Single race is defined as only one race reported on the birth certificate.
[4]Includes all persons of Hispanic origin of any race.

SOURCE: National Center for Health Statistics, National Vital Statistics System, Natality.

Table 3. Number of cases and rate of gestational diabetes, by selected characteristics: United States, 2016, 2019, and 2020

[Rates are number of births to women with gestational diabetes per 100 births in specified group]

Characteristic	Number of births			Number of cases of gestational diabetes			Rate (95% confidence interval)			Percent change			Not stated[1]		
	2016	2019	2020	2016	2019	2020	2016	2019	2020	2016–2019	2019–2020	2016–2020	2016	2019	2020
Total................	3,945,875	3,747,540	3,613,647	234,847	258,676	281,789	6.0 (5.9–6.0)	6.9 (6.9–6.9)	7.8 (7.8–7.8)	†15	†13	†30	3,781	3,284	4,063
Age group[2] (years)															
Under 20	212,062	173,461	159,808	4,068	3,779	3,992	1.9 (1.9–2.0)	2.2 (2.1–2.2)	2.5 (2.4–2.6)	†16	†14	†32	235	152	184
20–24................	803,978	704,342	665,595	26,155	27,012	29,644	3.3 (3.2–3.3)	3.8 (3.8–3.9)	4.5 (4.4–4.5)	†15	†18	†36	825	663	722
25–29................	1,149,122	1,078,097	1,024,402	58,337	62,592	67,726	5.1 (5.0–5.1)	5.8 (5.8–5.9)	6.6 (6.6–6.7)	†14	†14	†29	1,065	970	1,147
30–34................	1,111,042	1,089,281	1,069,984	78,022	86,448	94,391	7.0 (7.0–7.1)	7.9 (7.9–8.0)	8.8 (8.8–8.9)	†13	†11	†26	1,032	858	1,193
35–39................	547,488	572,598	564,059	52,681	60,686	66,179	9.6 (9.6–9.7)	10.6 (10.5–10.7)	11.7 (11.7–11.8)	†10	†10	†22	493	517	663
40 and over	122,183	129,761	129,799	15,584	18,159	19,857	12.8 (12.6–13.0)	14.0 (13.8–14.2)	15.3 (15.1–15.5)	†9	†9	†20	131	124	154
BMI[2,3]															
Underweight (BMI less than 18.5)	134,512	111,420	99,872	3,831	3,722	3,674	2.9 (2.8–2.9)	3.3 (3.2–3.4)	3.7 (3.6–3.8)	†14	†12	†28	120	96	114
Normal weight (BMI of 18.5–24.9)	1,701,087	1,502,897	1,416,057	60,608	62,027	65,645	3.6 (3.5–3.6)	4.1 (4.1–4.2)	4.6 (4.6–4.7)	†14	†12	†28	1,336	1,118	1,320
Overweight (BMI of 25.0–29.9)	998,761	985,207	962,875	60,607	66,594	73,120	6.1 (6.0–6.1)	6.8 (6.7–6.8)	7.6 (7.5–7.7)	†11	†12	†25	784	557	751
Obese (BMI greater than 29.9)	1,002,622	1,061,736	1,064,435	104,200	121,159	134,518	10.4 (10.3–10.5)	11.4 (11.4–11.5)	12.6 (12.6–12.7)	†10	†11	†21	736	571	752
Plurality[2]															
Singleton	3,810,149	3,623,963	3,498,335	223,902	247,489	270,428	5.9 (5.9–5.9)	6.8 (6.8–6.9)	7.7 (7.7–7.8)	†15	†13	†31	3,675	3,206	3,948
Twin.................	131,723	120,291	112,437	10,557	10,833	10,969	8.0 (7.9–8.2)	9.0 (8.8–9.2)	9.8 (9.6–9.9)	†13	†9	†23	103	77	115
Triplet and higher order	4,003	3,286	2,875	388	354	392	9.7 (8.8–10.6)	10.8 (9.7–11.8)	13.6 (12.4–14.9)	11	†26	†40	3	1	–

† Significant change ($p < 0.05$).
– Quantity zero.
[1]No response reported for the "risk factors in this pregnancy" item on the birth certificate.
[2]Significant increasing trend ($p < 0.05$).
[3]BMI is body mass index.
SOURCE: National Center for Health Statistics, National Vital Statistics System, Natality.

Table 4. Number of cases and rate of gestational diabetes, by state of residence of mother: United States, 2016, 2019, and 2020

[Rates are number of births to women with gestational diabetes per 100 births in specified group]

Reporting area	Number of births 2016	Number of births 2019	Number of births 2020	Number of cases of gestational diabetes 2016	Number of cases of gestational diabetes 2019	Number of cases of gestational diabetes 2020	Rate (95% confidence interval) 2016	Rate (95% confidence interval) 2019	Rate (95% confidence interval) 2020	Percent change 2016–2019	Percent change 2019–2020	Percent change 2016–2020	Not stated[1] 2016	Not stated[1] 2019	Not stated[1] 2020
Total	3,945,875	3,747,540	3,613,647	234,847	258,676	281,789	6.0 (5.9–6.0)	6.9 (6.9–6.9)	7.8 (7.8–7.8)	†15	†13	†30	3,781	3,284	4,063
Alabama	59,151	58,615	57,647	2,805	3,390	3,514	4.7 (4.6–4.9)	5.8 (5.6–6.0)	6.1 (5.9–6.3)	†23	†5	†30	3	4	2
Alaska.	11,209	9,822	9,469	1,050	1,143	1,183	9.4 (8.9–10.0)	11.7 (11.1–12.4)	12.6 (11.9–13.3)	†24	†8	†34	75	82	79
Arizona	84,520	79,375	76,947	6,423	6,889	7,333	7.6 (7.4–7.8)	8.7 (8.5–8.9)	9.5 (9.3–9.7)	†14	†9	†25	–	2	1
Arkansas.	38,274	36,564	35,251	1,785	2,072	2,318	4.7 (4.5–4.9)	5.7 (5.4–5.9)	6.6 (6.3–6.8)	†21	†16	†40	–	1	–
California	488,827	446,479	420,259	28,925	32,462	34,093	5.9 (5.9–6.0)	7.3 (7.2–7.4)	8.1 (8.0–8.2)	†24	†11	†37	3	345	219
Colorado.	66,613	62,869	61,494	2,893	3,311	3,683	4.3 (4.2–4.5)	5.3 (5.1–5.4)	6.0 (5.8–6.2)	†23	†13	†40	12	10	15
Connecticut	36,015	34,258	33,460	2,325	2,518	2,492	6.6 (6.3–6.8)	7.4 (7.1–7.7)	7.5 (7.2–7.8)	†12	1	†14	694	121	139
Delaware.	10,992	10,562	10,392	797	597	953	7.3 (6.8–7.7)	5.7 (5.2–6.1)	9.2 (8.6–9.8)	†-22	†61	†26	1	15	32
District of Columbia . . .	9,858	9,079	8,874	372	411	512	3.8 (3.4–4.2)	4.5 (4.1–5.0)	5.8 (5.3–6.3)	†18	†29	†53	15	4	4
Florida	225,022	220,002	209,671	10,223	14,080	14,898	4.6 (4.5–4.6)	6.4 (6.3–6.5)	7.1 (7.0–7.2)	†39	†11	†54	416	317	294
Georgia.	130,042	126,371	122,473	5,905	6,763	7,434	4.6 (4.4–4.7)	5.4 (5.2–5.5)	6.1 (5.9–6.2)	†17	†13	†33	348	201	143
Hawaii.	18,059	16,797	15,785	1,283	1,177	1,345	7.1 (6.7–7.5)	7.0 (6.6–7.4)	8.5 (8.1–9.0)	-1	†21	†20	–	–	1
Idaho	22,482	22,063	21,533	1,116	1,122	1,246	5.0 (4.7–5.3)	5.1 (4.8–5.4)	5.8 (5.5–6.1)	2	†14	†16	24	13	18
Illinois.	154,445	140,128	133,298	10,198	11,376	12,085	6.6 (6.5–6.7)	8.1 (8.0–8.3)	9.1 (8.9–9.2)	†23	†12	†38	226	122	168
Indiana	83,091	80,859	78,616	5,152	5,878	6,185	6.2 (6.0–6.4)	7.3 (7.1–7.4)	7.9 (7.7–8.1)	†18	†8	†27	4	4	47
Iowa	39,403	37,649	36,114	2,997	3,341	3,381	7.6 (7.3–7.9)	8.9 (8.6–9.2)	9.4 (9.1–9.7)	†17	†6	†24	1	2	1
Kansas	38,053	35,395	34,376	2,245	2,601	2,989	5.9 (5.7–6.1)	7.3 (7.1–7.6)	8.7 (8.4–9.0)	†24	†19	†47	–	–	1
Kentucky.	55,449	53,069	51,668	3,113	3,654	4,089	5.6 (5.5–5.8)	6.9 (6.7–7.1)	8.0 (7.8–8.2)	†23	†16	†43	281	146	543
Louisiana	63,178	58,941	57,328	3,242	3,478	4,343	5.1 (5.0–5.3)	5.9 (5.7–6.1)	7.6 (7.4–7.8)	†16	†29	†49	–	1	1
Maine	12,705	11,779	11,539	789	999	1,057	6.2 (5.8–6.6)	8.5 (8.0–9.0)	9.2 (8.6–9.7)	†37	†8	†48	15	2	–
Maryland	73,136	70,178	68,554	4,880	5,229	6,110	6.7 (6.5–6.9)	7.5 (7.3–7.6)	8.9 (8.7–9.1)	†12	†19	†33	11	40	39
Massachusetts	71,317	69,117	66,428	4,006	4,887	5,219	5.6 (5.5–5.8)	7.1 (6.9–7.3)	7.9 (7.7–8.1)	†27	†11	†41	96	137	233
Michigan.	113,315	107,886	104,074	5,961	6,575	7,232	5.3 (5.1–5.4)	6.1 (6.0–6.3)	7.0 (6.8–7.1)	†15	†15	†32	268	239	182
Minnesota.	69,749	66,027	63,443	4,735	4,857	5,366	6.8 (6.6–7.0)	7.4 (7.2–7.6)	8.5 (8.2–8.7)	†9	†15	†25	64	79	54
Mississippi	37,928	36,636	35,473	1,312	1,495	1,678	3.5 (3.3–3.6)	4.1 (3.9–4.3)	4.7 (4.5–5.0)	†17	†15	†34	11	11	5
Missouri	74,705	72,127	69,285	4,558	5,301	5,937	6.1 (5.9–6.3)	7.3 (7.2–7.5)	8.6 (8.4–8.8)	†20	†18	†41	1	3	2
Montana	12,282	11,079	10,791	528	554	677	4.3 (3.9–4.7)	5.0 (4.6–5.4)	6.3 (5.8–6.7)	†16	†26	†47	12	2	1
Nebraska	26,589	24,755	24,291	1,679	1,744	1,915	6.3 (6.0–6.6)	7.1 (6.7–7.4)	7.9 (7.6–8.2)	†13	†11	†25	37	30	52
Nevada	36,260	35,072	33,653	2,372	2,412	2,700	6.5 (6.3–6.8)	6.9 (6.6–7.1)	8.0 (7.7–8.3)	†6	†16	†23	–	1	–
New Hampshire	12,267	11,839	11,791	650	862	958	5.3 (4.9–5.7)	7.3 (6.8–7.8)	8.1 (7.7–8.6)	†38	†11	†53	107	44	36
New Jersey.	102,647	99,585	97,954	7,547	8,548	9,367	7.4 (7.2–7.5)	8.6 (8.4–8.8)	9.6 (9.4–9.7)	†16	†12	†30	7	6	8
New Mexico	24,692	22,960	21,903	1,405	1,203	1,415	5.7 (5.4–6.0)	5.2 (5.0–5.5)	6.5 (6.1–6.8)	†-9	†25	†14	–	5	2
New York	234,283	221,539	209,338	17,618	17,952	18,804	7.5 (7.4–7.6)	8.1 (8.0–8.2)	9.0 (8.9–9.1)	†8	†11	†20	218	484	398
North Carolina	120,779	118,725	116,730	6,859	7,462	8,591	5.7 (5.5–5.8)	6.3 (6.1–6.4)	7.4 (7.2–7.5)	†11	†17	†30	16	6	9
North Dakota	11,383	10,454	10,059	655	612	634	5.8 (5.3–6.2)	5.9 (5.4–6.3)	6.3 (5.8–6.8)	2	7	9	–	–	–
Ohio	138,085	134,461	129,191	10,238	11,032	11,541	7.4 (7.3–7.6)	8.2 (8.1–8.4)	8.9 (8.8–9.1)	†11	†9	†20	27	8	16
Oklahoma	52,592	49,143	47,623	2,505	2,907	3,053	4.8 (4.6–4.9)	5.9 (5.7–6.1)	6.4 (6.2–6.6)	†23	†8	†33	1	2	–
Oregon	45,535	41,858	39,820	3,731	3,862	4,021	8.2 (7.9–8.4)	9.2 (8.9–9.5)	10.1 (9.8–10.4)	†12	†10	†23	2	2	2
Pennsylvania	139,409	134,230	130,693	7,659	8,861	9,955	5.5 (5.4–5.6)	6.6 (6.5–6.7)	7.6 (7.5–7.8)	†20	†15	†38	21	32	45
Rhode Island	10,798	10,175	10,101	710	784	855	6.6 (6.1–7.0)	7.7 (7.2–8.2)	8.5 (7.9–9.0)	†17	†10	†29	7	14	17

See footnotes at end of table.

Table 4. Number of cases and rate of gestational diabetes, by state of residence of mother: United States, 2016, 2019, and 2020—Con.

[Rates are number of births to women with gestational diabetes per 100 births in specified group]

Reporting area	Number of births			Number of cases of gestational diabetes			Rate (95% confidence interval)			Percent change			Not stated[1]		
	2016	2019	2020	2016	2019	2020	2016	2019	2020	2016–2019	2019–2020	2016–2020	2016	2019	2020
South Carolina	57,342	57,038	55,704	3,770	3,659	4,204	6.6 (6.4–6.8)	6.4 (6.2–6.6)	7.5 (7.3–7.8)	-3	†17	†14	2	4	5
South Dakota	12,275	11,449	10,960	955	1,007	1,031	7.8 (7.3–8.3)	8.8 (8.3–9.3)	9.4 (8.9–10.0)	†13	7	†21	1	3	9
Tennessee.	80,807	80,450	78,689	4,623	5,550	5,972	5.7 (5.6–5.9)	6.9 (6.7–7.1)	7.6 (7.4–7.8)	†21	†10	†33	4	4	2
Texas	398,047	377,599	368,190	19,766	20,856	23,608	5.0 (4.9–5.0)	5.5 (5.5–5.6)	6.4 (6.3–6.5)	†10	†16	†28	2	400	497
Utah	50,464	46,826	45,702	2,999	2,885	3,116	5.9 (5.7–6.1)	6.2 (5.9–6.4)	6.8 (6.6–7.0)	†5	†10	†15	–	–	–
Vermont	5,756	5,361	5,133	276	334	377	4.8 (4.2–5.3)	6.2 (5.6–6.9)	7.3 (6.6–8.1)	†29	†18	†52	–	1	–
Virginia.	102,460	97,429	94,749	5,856	5,592	6,753	5.7 (5.6–5.9)	5.7 (5.6–5.9)	7.1 (7.0–7.3)	0	†25	†25	4	6	3
Washington	90,505	84,895	83,086	7,658	8,378	9,023	8.5 (8.3–8.7)	9.9 (9.7–10.1)	10.9 (10.7–11.1)	†16	†10	†28	433	27	578
West Virginia	19,079	18,136	17,323	1,254	1,105	1,156	6.6 (6.3–7.0)	6.1 (5.8–6.5)	6.7 (6.3–7.1)	†-8	†10	2	98	91	93
Wisconsin.	66,615	63,270	60,594	4,178	4,555	5,047	6.3 (6.1–6.5)	7.2 (7.0–7.4)	8.3 (8.1–8.6)	†14	†15	†32	213	211	66
Wyoming	7,386	6,565	6,128	266	354	341	3.6 (3.2–4.0)	5.4 (4.8–5.9)	5.6 (5.0–6.1)	†50	4	†56	–	–	1

† Significant change ($p < 0.05$).
– Quantity zero.
[1]No response reported for the "risk factors in this pregnancy" item on the birth certificate.

SOURCE: National Center for Health Statistics, National Vital Statistics System, Natality.

FIRST CLASS MAIL
POSTAGE & FEES PAID
CDC/NCHS
PERMIT NO. G-284

For more NCHS NVSRs, visit:
https://www.cdc.gov/nchs/products/nvsr.htm.

Contents

Acknowledgments

Suggested citation

Copyright information

National Center for Health Statistics