



# New York State Behavioral Risk Factor Surveillance System Brief

The Behavioral Risk Factor Surveillance System (BRFSS) is an annual telephone survey of adults developed by the Centers for Disease Control and Prevention conducted in all 50 States, the District of Columbia, and several United States Territories. The New York Behavioral Risk Factor Surveillance System is administered by the New York State Department of Health to provide statewide and regional information on behaviors, risk factors, and use of preventive health services related to the leading causes of chronic and infectious diseases, disability, injury, and death.

## Diabetes

New York State Adults, 2021



### Introduction

Diabetes is a chronic disease in which blood sugar (glucose) levels are above normal. Insulin, a hormone made by the pancreas, helps blood sugar enter the body's cells for use as energy. In type 1 diabetes, the pancreas fails to produce insulin. In type 2 diabetes, the cells of the body become resistant to insulin.<sup>1</sup> Type 2 diabetes accounts for about 90%-95% of all diagnosed cases and type 1 diabetes accounts for about 5%-10%.<sup>2</sup>

Diabetes is complicated and can be overwhelming to manage in everyday life. Poorly managed diabetes can lead to complications such as heart disease, stroke, kidney disease, vision loss, and nerve damage.<sup>3</sup> Diabetes is also a very costly disease. Medical spending for people with diagnosed diabetes is more than double compared to those without diabetes.<sup>4</sup>

Diabetes self-management education and support is an evidence-based program covered by Medicare, New York State Medicaid, and commercial health insurance. Participation in diabetes self-management education and support program can help people build the confidence to manage their diabetes, prevent or delay complications, and live longer and healthier lives.<sup>5</sup>

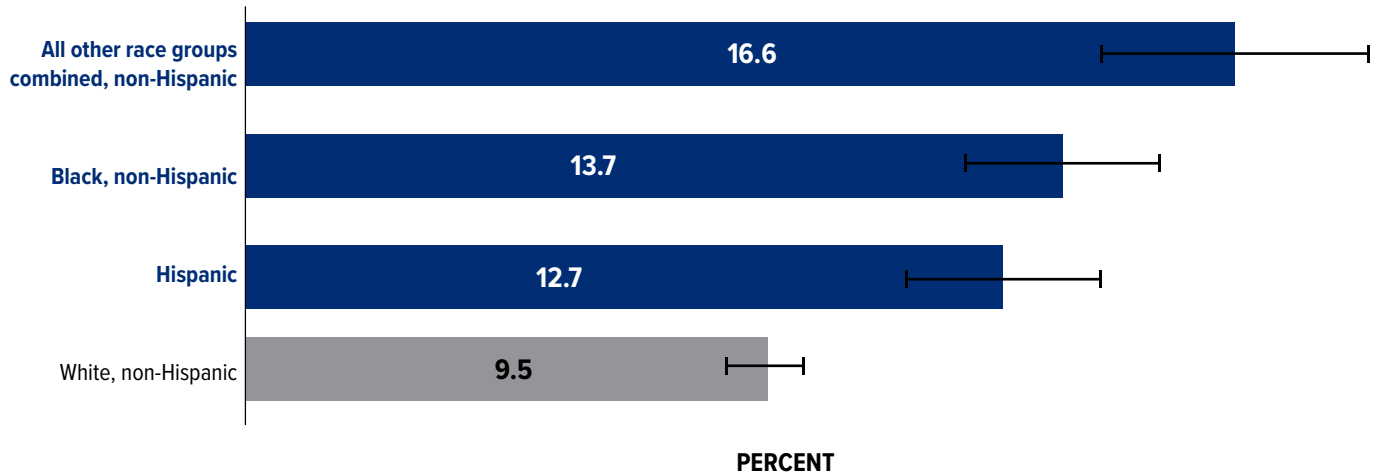
### Health Equity

Many people with diabetes experience inequities in health. Diabetes is more common among Black, non-Hispanic adults, Hispanic adults, adults with lower income, adults with less education attainment, and adults living with a disability. Social determinants of health such as lack of access to healthy food, lack of safe places for physical activity, and housing instability, especially when fueled by structural racism, contribute to disparities in the burden of diabetes. The New York State Department of Health remains committed to advancing health equity by improving diabetes detection and increasing access to and participation in DSMES programs so that those with diabetes can achieve optimal health.

### Key Findings

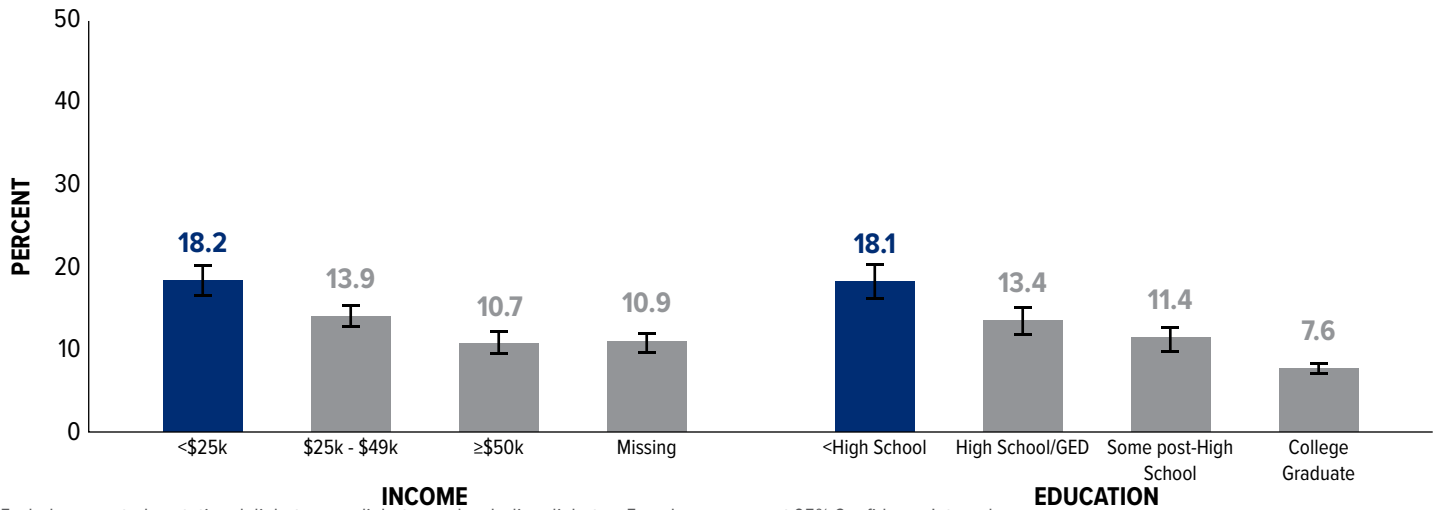
- An estimated 1.8 million adult New Yorkers (11.4%) have diagnosed diabetes.
- The prevalence of diabetes is higher among adults from all other race groups combined (16.6%), Black, non-Hispanic adults (13.7%), and Hispanic adults (12.7%) when compared to White non-Hispanic adults (9.5%) (Figure 1).
- Social determinants of health contribute to disparities in diabetes. Adults with an annual household income of less than \$25,000 are more likely to have diabetes than those with an annual household income of \$50,000 or more (18.2% vs. 10.7%) (Figure 2). Adults with less than a high school education are more likely to have diabetes (18.1%) than those who graduated from college (7.6%) (Figure 2).
- Adults with obesity are more likely to have diabetes (19.3%) compared to adults with overweight (11.3%) or those with neither overweight nor obesity (6.1%).
- Diabetes is more prevalent among adults enrolled in Medicare (20.1%), those enrolled in Medicaid (13.4%), or those enrolled in other insurance (12.4%) compared to those with private insurance (8.1%).
- Diabetes increases with age and is most common among adults aged 65 years and older (21.9%).
- The prevalence of diabetes among adults living with disability (22.4%) is almost three times greater than those living without disability (7.7%).

**Figure 1. Percent of Diagnosed Diabetes\* Among New York State Adults by Race/Ethnicity, Behavioral Risk Factor Surveillance System 2021**



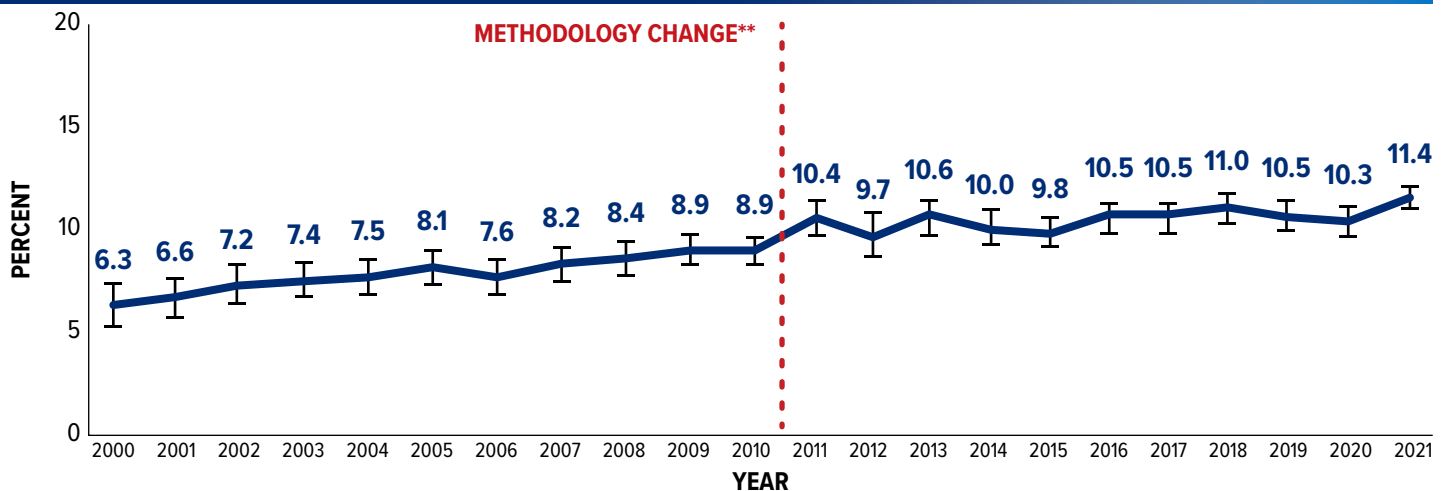
\*Excludes reported gestational diabetes, prediabetes, or borderline diabetes. Error bars represent 95% Confidence Interval.

**Figure 2. Percent of Diagnosed Diabetes\* Among New York State Adults by Annual Household Income and Educational Attainment, Behavioral Risk Factor Surveillance System 2021**



\*Excludes reported gestational diabetes, prediabetes, or borderline diabetes. Error bars represent 95% Confidence Interval.

**Figure 3. Percent of Diagnosed Diabetes\* Among New York State Adults, Behavioral Risk Factor Surveillance System 2000-2021\*\***



\*Excludes reported gestational diabetes, prediabetes, or borderline diabetes. Error bars represent 95% Confidence Interval.

\*\*Because of BRFSS methodology changes to account for the increasing proportion of cellular telephone-only households and declining response rates, 2011 and later reports are not comparable to prior years ([http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6122a3.htm?s\\_cid=mm6122a3\\_w](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6122a3.htm?s_cid=mm6122a3_w)).

**Table 1. Diagnosed Diabetes<sup>a</sup> Among New York State Adults, Behavioral Risk Factor Surveillance System 2021**

	Diabetes <sup>a</sup>	
	% <sup>b</sup>	95% CI <sup>b</sup>
<b>New York State [n=39,095]</b>	<b>11.4</b>	<b>10.9 - 12.0</b>
<b>Sex</b>		
Male	12.3	11.4 - 13.1
Female	10.6	9.9 - 11.4
<b>Age (Years)</b>		
18-24	1.2	0.6 - 1.8
25-34	1.7	1.2 - 2.3
35-44	4.9	4.0 - 5.8
45-54	12.8	11.2 - 14.5
55-64	19.7	17.9 - 21.5
65+	21.9	20.5 - 23.4
<b>Race/ethnicity</b>		
White, non-Hispanic	9.5	8.9 - 10.0
Black, non-Hispanic	13.7	12.1 - 15.3
Hispanic	12.7	11.1 - 14.2
Other race groups combined, non-Hispanic <sup>c</sup>	16.6	13.8 - 19.3
<b>Annual household income</b>		
Less than \$25,000	18.2	16.3 - 20.1
\$25,000-\$49,999	13.9	12.5 - 15.3
\$50,000 and greater	10.7	9.5 - 11.9
Missing <sup>d</sup>	10.9	9.8 - 12.0
<b>Education attainment</b>		
Less than high school	18.1	15.9 - 20.3
High school or GED	13.4	12.2 - 14.7
Some college	11.4	10.2 - 12.5
College graduate	7.6	6.9 - 8.3
<b>Weight status</b>		
Neither overweight nor obese	6.1	5.2 - 7.0
Overweight	11.3	10.3 - 12.4
Obese	19.3	17.9 - 20.6
<b>Health care coverage type</b>		
Private	8.1	7.4 - 8.8
Medicare	20.1	18.6 - 21.7
Medicaid	13.4	11.6 - 15.2
Other insurance <sup>e</sup>	12.4	10.7 - 14.1
No coverage	4.5	2.9 - 6.1
<b>Disability status<sup>f</sup></b>		
Yes	22.4	20.9 - 23.9
No	7.7	7.1 - 8.2
<b>Region</b>		
New York City	12.0	11.0 - 13.1
New York State exclusive of New York City	11.0	10.4 - 11.6

Notes: <sup>a</sup> Does not include reported gestational diabetes, prediabetes, or borderline diabetes. <sup>b</sup> % = Weighted percentage; CI = Confidence interval. <sup>c</sup> All other race groups combined, non-Hispanic includes American Indian or Alaskan Native, Asian, Native Hawaiian or other Pacific Islander, or other race or multiracial. <sup>d</sup> "Missing" category included because more than 10% of the sample did not report income. <sup>e</sup> Other insurance includes Children's Health Insurance Plan (CHIP), TRICARE, VA/Military, Indian Health Service, state sponsored health plan, or other government plan. <sup>f</sup> All respondents who reported at least one type of disability (cognitive, mobility, vision, self-care, independent living, or deafness).



## References

1. Diabetes Overview: What is Diabetes? National Institute of Diabetes and Digestive and Kidney Diseases. Last reviewed April 2023. Accessed May 31, 2023. <https://www.niddk.nih.gov/health-information/diabetes/overview/what-is-diabetes>.
2. Diabetes Quick Facts. Centers for Disease Control and Prevention. Last reviewed April 4, 2023. Accessed May 31, 2023. <https://www.cdc.gov/diabetes/basics/quick-facts.html>.
3. Diabetes Overview: Preventing Diabetes Problems. National Institute of Diabetes and Digestive and Kidney Diseases. Accessed May 31, 2023. <https://www.niddk.nih.gov/health-information/diabetes/overview/preventing-problems>.
4. Yang W, Dall TM, Beronjia K, Lin J, Semilla AP, Chakrabarti R et al. Economic Costs of Diabetes in the U.S. in 2017. Diabetes Care 2018;41(5):917-928. Accessed May 31, 2023. <https://doi.org/10.2337/dci18-0007>.
5. Diabetes Self-Management Education and Support (DSMES) Toolkit: Background. Centers for Disease Control and Prevention. Last reviewed April 4, 2023. Accessed May 31, 2023. <https://www.cdc.gov/diabetes/dsmes-toolkit/background/background.html>.



## Behavioral Risk Factor Surveillance System Questions

### Diagnosed Diabetes

1. Have you ever been told by a doctor that you have diabetes?  
[If “Yes” and respondent is female, ask:]
2. Was this only when you were pregnant?

Gestational (pregnancy-related) diabetes, prediabetes, and borderline diabetes were not counted as diabetes cases in the calculation of prevalence estimates.



## Suggested Citation

(Wong, S. Austin, R. Millstein, S. Kaelin-Kee, J.). Diabetes, New York State Adults, 2021. BRFSS Brief, No. 2024-04. Albany, NY: New York State Department of Health, Division of Chronic Disease Prevention, Bureau of Chronic Disease Evaluation and Research, February 2024.



## Program Contributions

New York State Department of Health  
Bureau of Chronic Disease Evaluation and Research  
Bureau of Community Chronic Disease Prevention



## Contact Information

### Contact us by

**Phone:** (518) 473-0673

**Email:** [BRFSS@health.ny.gov](mailto:BRFSS@health.ny.gov)

**Visit:** [health.ny.gov](http://health.ny.gov)



**Department  
of Health**