



Diabetes

2019

Report Card



**Centers for Disease  
Control and Prevention**  
National Center for Chronic  
Disease Prevention and  
Health Promotion

## Purpose of This Report

This report is required under the Catalyst to Better Diabetes Care Act of 2009 (Section 10407 of Public Law 111-148). This act calls for a diabetes report card that includes information and data about diabetes, prediabetes, preventive care practices, risk factors, quality of care, diabetes outcomes, and, to the extent possible, trend and state data.

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## Background

The *Diabetes Report Card* provides current information on the status of diabetes and its complications in the United States. It has been published every 2 years since 2012 by the Centers for Disease Control and Prevention (CDC).

This publication includes information and data on diabetes, preventive care practices, health outcomes, and risk factors such as race, ethnicity, level of education, and prediabetes. It also includes information about national trends and, to the extent possible, progress made by the states to meet national goals for improving diabetes care and reducing health care costs and the rate of new cases.

Public health professionals, policy makers, state health departments, and communities can use these data to focus their type 2 diabetes prevention and diabetes management efforts on areas of greatest need.<sup>1,2</sup>

## Diabetes Overview

Diabetes is a group of diseases characterized by high blood sugar. When a person has diabetes, the body either does not make enough insulin (type 1) or is unable to properly use insulin (type 2). When the body does not have enough insulin or cannot use it properly, blood sugar (glucose) builds up in the blood. Prediabetes is a condition in which blood sugar is higher than normal but not high enough to be classified as diabetes.

People with diabetes can develop high blood pressure, high cholesterol, and high triglycerides (a type of fat in the blood). High blood sugar, particularly when combined with high blood pressure and high triglycerides, can lead to heart disease, stroke, blindness, kidney failure, amputations of the legs and feet, and even early death.

## What's New?

- In the past decade, the annual rate of new cases of diabetes among US adults has been going down overall.
- Diabetes-related complications have increased among young adults aged 18–44 years and among middle-aged adults aged 45–64 years.
- The rate of new cases of diabetes among children and adolescents continues to grow.
- Nearly 1 in 5 adolescents aged 12–18 years and 1 in 4 young adults aged 19–34 years have prediabetes.

# INTRODUCTION

Diabetes is also associated with increased risk of certain types of cancer, such as liver, pancreas, uterine, colon, breast, and bladder cancer.<sup>3</sup> High blood sugar also increases a person's chance of developing dementia and Alzheimer's disease.<sup>4</sup> In addition, the average medical costs for people with diagnosed diabetes are 2.3 times higher than costs for people without diabetes.<sup>5</sup> These higher costs are often caused by diabetes-related health conditions and resulting hospitalizations.

People with diabetes, their caregivers and health care providers, departments of health, policy makers, and community organizations can help to reduce the risk of serious diabetes-related complications.

For people with diabetes, research<sup>6-10</sup> shows that:

- Blood sugar management can reduce the risk of eye disease, kidney disease, and nerve disease by 40%.
- Blood pressure management can reduce the risk of heart disease and stroke by 33% to 50% and decline in kidney function by 30% to 70%.
- Cholesterol management can reduce cardiovascular complications by 20% to 50%.
- Regular eye exams and timely treatment could prevent up to 90% of diabetes-related blindness.
- Regular foot exams and patient education could prevent up to 85% of diabetes-related amputations.



## Diabetes Incidence and Prevalence

Diabetes is the seventh leading cause of death in the United States. Adults aged 50 years or older with diabetes die 4.6 years earlier, develop disability 6 to 7 years earlier, and spend about 1 to 2 more years in a disabled state than adults without diabetes.<sup>11</sup>

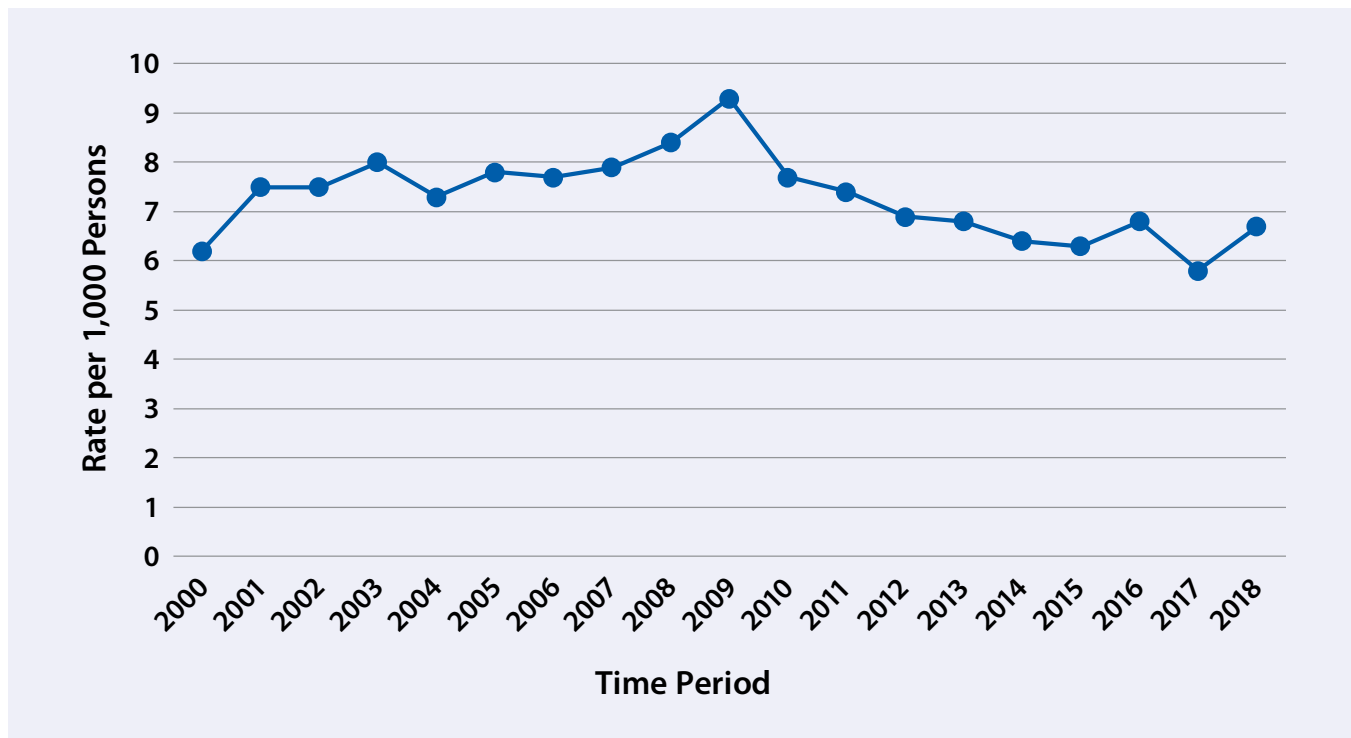
About 34.2 million people—or 10.5% of the US population—had diabetes (diagnosed or undiagnosed) in 2018. This total included 34.1 million adults aged 18 years or older, or 13% of all US adults. About 7.3 million of these adults had diabetes but were not aware that they had the disease or did not report that they had it.<sup>12</sup>

After almost two decades of continual increases, the incidence of diagnosed cases of diabetes (type 1 and

type 2 combined) in the United States decreased from 2008 to 2017.<sup>13</sup> **Diabetes incidence** is the rate of new cases of diagnosed diabetes. About 1.5 million new cases of diabetes (6.9 per 1,000 persons) were diagnosed among US adults aged 18 years or older in 2018.

Figure 1 shows diabetes incidence trends during 2000–2018, with a declining curve after 2009. The decrease in diabetes incidence may be due to multiple factors that cannot be determined by current data. Compared to adults aged 18–44 years, incidence rates of diagnosed diabetes are estimated to be higher among adults aged 45–64 years and among those aged 65 years or older.<sup>12</sup>

**Figure 1. Trends in Incidence of Diagnosed Diabetes Among Adults Aged 18 Years or Older, United States, 2000–2018**



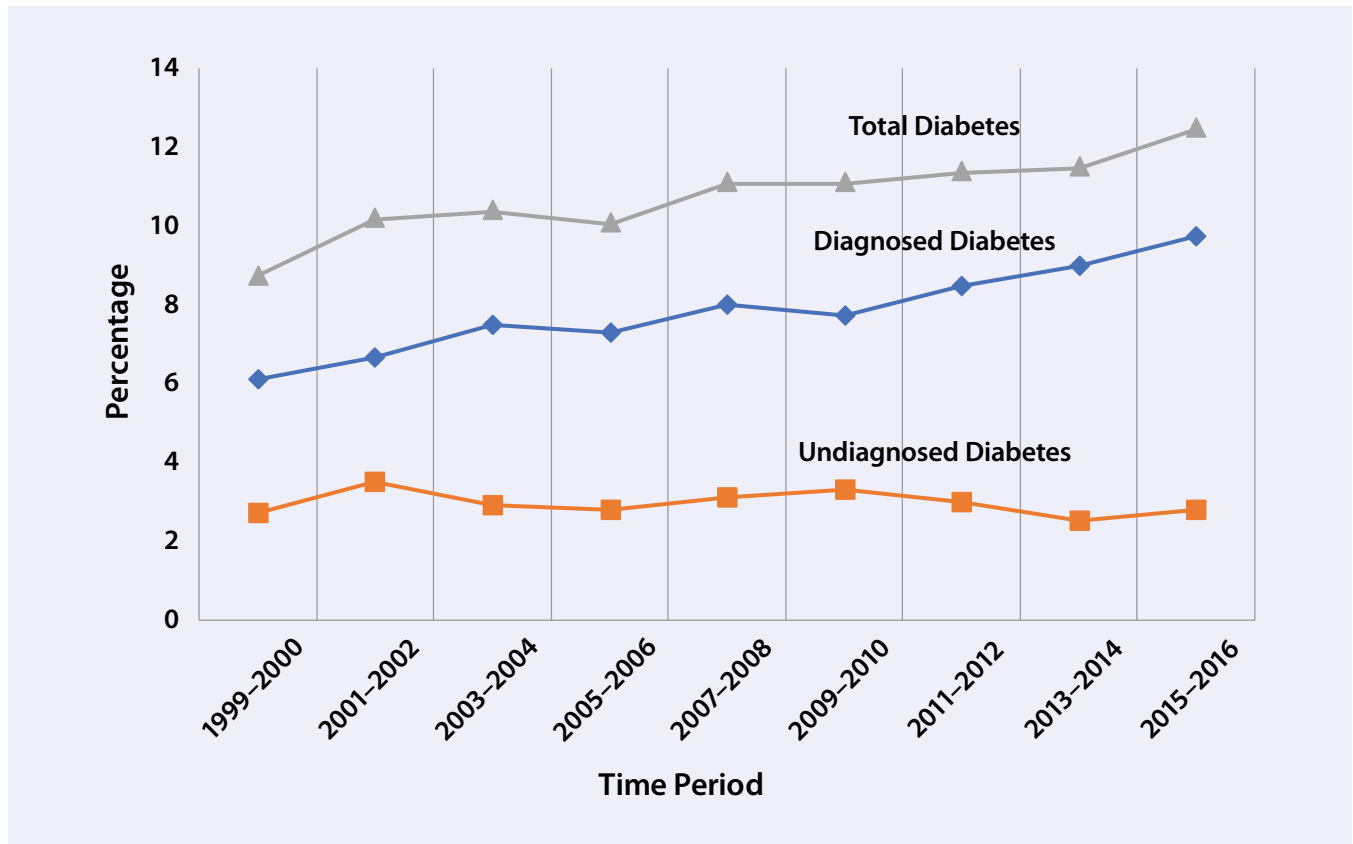
Notes: Rates are age-adjusted to the 2000 US standard population. Figure adapted from CDC's *National Diabetes Statistics Report 2020*. Data sources: CDC's United States Diabetes Surveillance System and National Health Interview Survey.

# NATIONAL AND STATE DIABETES TRENDS

**Diabetes prevalence** is the total number of existing cases, including new cases. The prevalence of total and diagnosed diabetes among US adults aged 18 years or older steadily increased from 1999 to 2016 (Figure 2). Similar trends were seen across all age groups, racial

and ethnic groups, education levels, and both sexes.<sup>12</sup> The increase in diabetes prevalence may be due in part to people living longer with diabetes because of improvements in self-management practices, lifestyle change interventions, and health care services.

**Figure 2. Trends in Prevalence of Diagnosed Diabetes, Undiagnosed Diabetes, and Total Diabetes Among Adults Aged 18 Years or Older, United States, 1999–2016**



Notes: Percentages are age-adjusted to the 2000 US standard population. Diagnosed diabetes was based on self-report. Undiagnosed diabetes was based on fasting plasma glucose and A1C levels among people self-reporting no diabetes. Figure adapted from CDC's *National Diabetes Statistics Report 2020*.

Data source: CDC's National Health and Nutrition Examination Surveys, 1999–2016.

## Race, Ethnicity, and Education

Members of some racial and ethnic minority groups are more likely to have diagnosed diabetes than non-Hispanic whites. American Indian or Alaska Native adults have the highest rates of diagnosed diabetes (14.7%) among all US racial and ethnic groups, followed by Hispanics (12.5%) and non-Hispanic blacks (11.7%) (Figure 3).

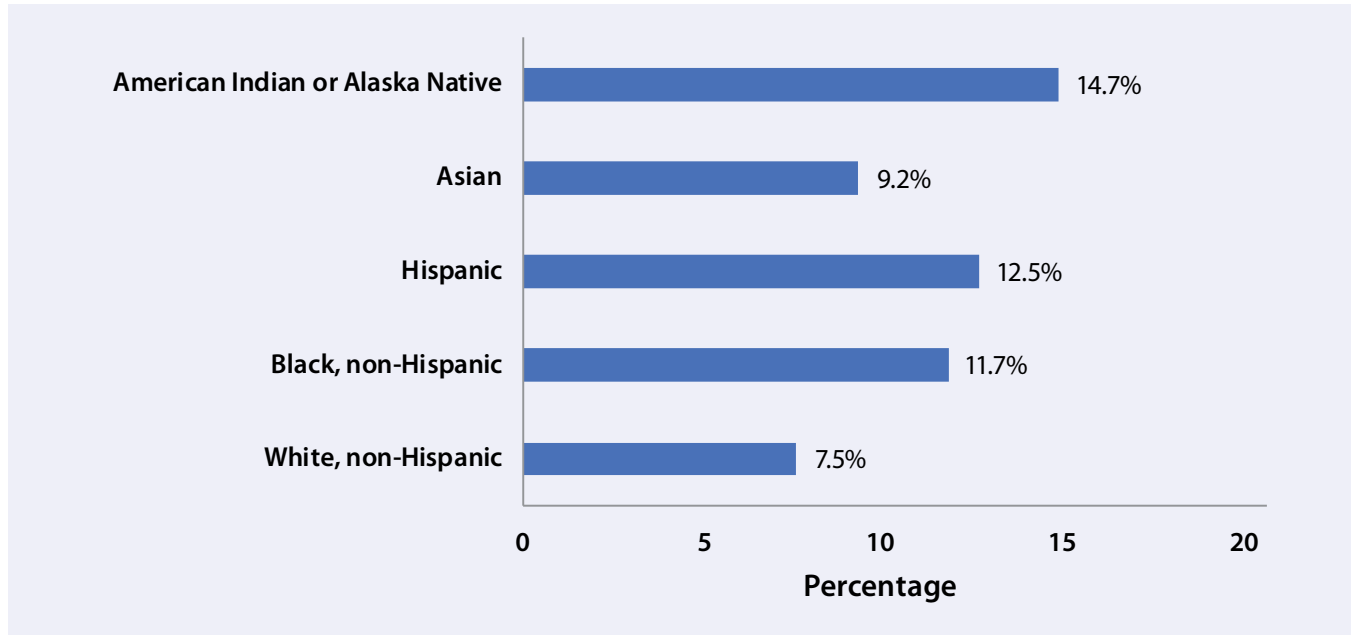
In addition, the percentage of adults living with diagnosed or undiagnosed diabetes varied significantly by racial and ethnic group and among subgroups of Hispanics and non-Hispanic Asians. Mexican (14.4%) and Puerto Rican (12.4%) subgroups had the highest prevalence of diabetes among adults of Hispanic origin. Among non-Hispanic Asians, the highest prevalence was among Asian Indian (12.6%) and Filipino (10.4%) populations.<sup>14</sup>

Differences in diabetes prevalence are seen in the overall US population and within racial and ethnic groups according to socioeconomic position, which is defined by level of education attained and the income-to-poverty ratio. For example, the prevalence of diabetes has increased among non-Hispanic whites with less education and lower incomes and among Hispanics with less education (Figure 4).<sup>15</sup>

An association has also been observed between lower education levels and less use of preventive care practices, such as annual foot and eye exams, regular laboratory testing of blood sugar levels (using the hemoglobin A1C test), and diabetes self-care education.<sup>16</sup>

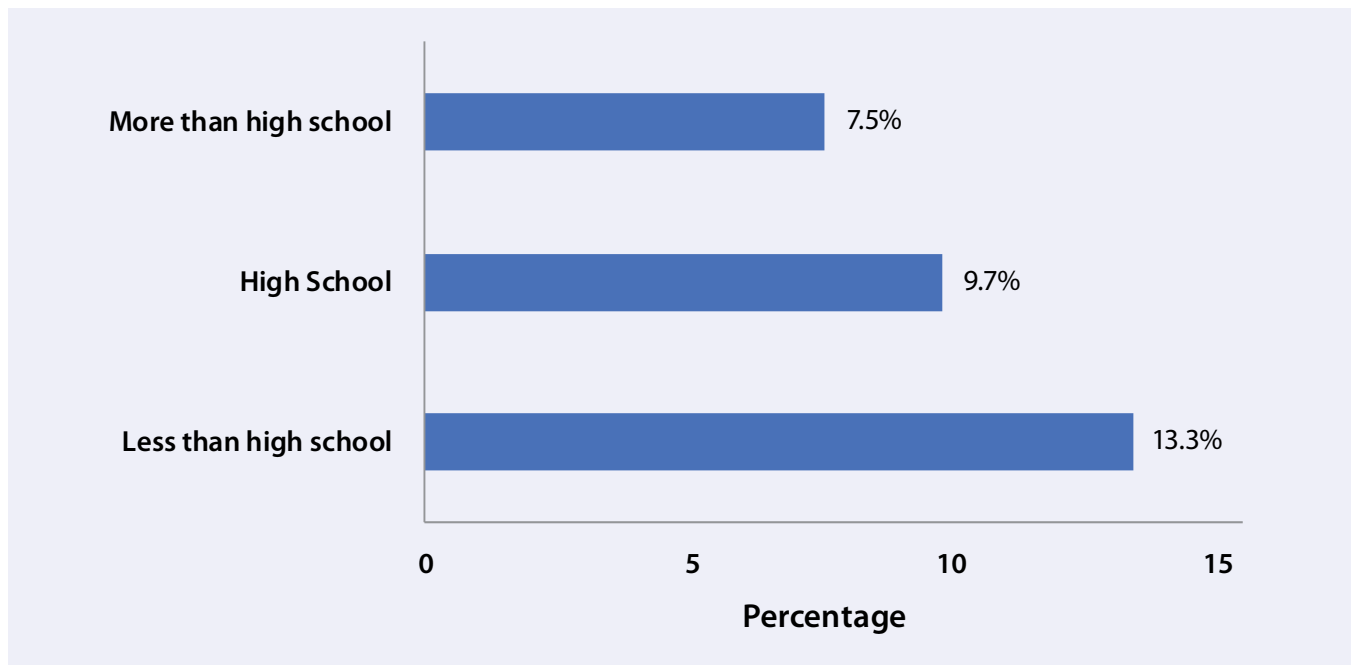


**Figure 3. Percentage of Adults Aged 18 Years or Older With Diagnosed Diabetes, by Racial or Ethnic Group, United States, 2017–2018**



Notes: Percentages are age-adjusted to the 2000 US standard population. Figure adapted from CDC's *National Diabetes Statistics Report 2020*. Data sources: CDC's National Health Interview Survey, 2017–2018, and the Indian Health Service National Data Warehouse, 2017 (American Indian or Alaska Native data).

**Figure 4. Percentage of Adults Aged 18 Years or Older With Diagnosed Diabetes, by Education Level, United States, 2017–2018**



Notes: Percentages are age-adjusted to the 2000 US standard population. Figure adapted from CDC's *National Diabetes Statistics Report 2020*. Data source: CDC's National Health Interview Survey, 2017–2018.



## Geographic Distribution of Diagnosed Diabetes in Adults

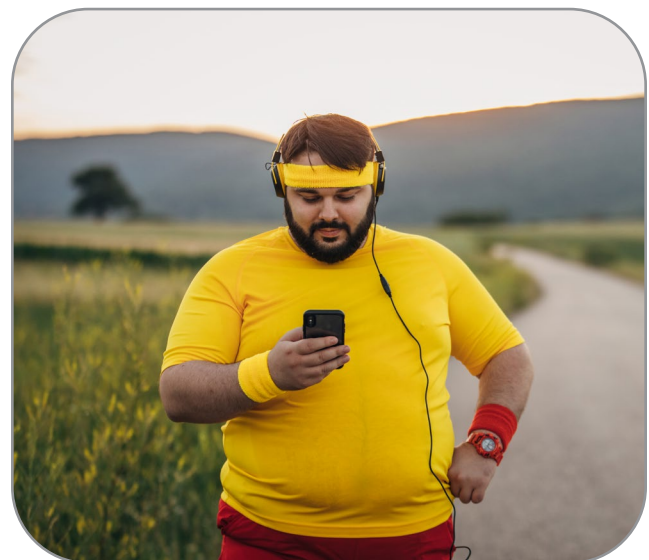
Diagnosed diabetes is prevalent across all 50 states, the District of Columbia, and some US territories. Table 1 shows the percentage of US adults who reported in 2016 that they had ever been told by a health care provider that they had diabetes. Estimates ranged from 6.2% in Colorado to 13.7% in Puerto Rico. In 19 of the 54 states and 3 US territories listed in Table 1, more than 10% of the population had diagnosed diabetes in 2016.

**Table 1. Percentage of US Adults Aged 18 Years or Older With Diagnosed Diabetes, 2016**

State or Territory	Percentage
<b>Median</b>	<b>9.5</b>
Alabama	13.2
Alaska	7.7
Arizona	9.7
Arkansas	12.1
California	9.7
Colorado	6.2
Connecticut	8.5
Delaware	9.1
District of Columbia	8.4
Florida	9.8
Georgia	11.4
Guam	11.3
Hawaii	9.5
Idaho	8.1
Illinois	9.5
Indiana	10.4
Iowa	8.1
Kansas	8.5
Kentucky	11.8
Louisiana	11.1
Maine	8.5
Maryland	9.8
Massachusetts	8.3
Michigan	9.8
Minnesota	7.6
Mississippi	12.4
Missouri	10.2
Montana	6.9
Nebraska	8
Nevada	10.1
New Hampshire	7.7
New Jersey	8.1
New Mexico	10.4
New York	9.4
North Carolina	10.1
North Dakota	8.2

State or Territory	Percentage
Ohio	9.7
Oklahoma	10.9
Oregon	8.4
Pennsylvania	9.6
Puerto Rico	13.7
Rhode Island	8.6
South Carolina	11.5
South Dakota	6.9
Tennessee	11.2
Texas	10.9
Utah	7.7
Vermont	7.3
US Virgin Islands	11.9
Virginia	9.6
Washington	8.6
West Virginia	12.7
Wisconsin	8.6
Wyoming	7.6

Note: Percentages are age-adjusted to the 2000 US standard population.  
Data sources: CDC's United States Diabetes Surveillance System and Behavioral Risk Factor Surveillance System.







Diabetes self-management education and support (DSMES) services have been scientifically proven to improve management practices among people with diabetes, which lowers the risk of complications and improves health outcomes.<sup>17</sup>

CDC supports states in their efforts to prevent serious and costly complications from diabetes. This support includes nationwide cooperative agreements, partnerships, and surveillance and research activities to improve access to, coverage for, and participation in DSMES. For example, state health departments funded by CDC are working with health care systems to establish or expand the use of telehealth to increase access to DSMES services. They are also working to encourage more pharmacists to participate.

In 2018, CDC released a [DSMES Toolkit](#) to provide a comprehensive set of resources and tools to support the development, promotion, implementation, and sustainability of DSMES services.

Research has shown that DSMES can also help lower health care costs by reducing hospitalizations, hospital readmissions, and emergency room visits for people with diabetes.<sup>17</sup> Every year, nearly 1 million people with

diabetes participate in DSMES services recognized by the American Diabetes Association (ADA) or accredited by the Association of Diabetes Care & Education Specialists (ADCES).

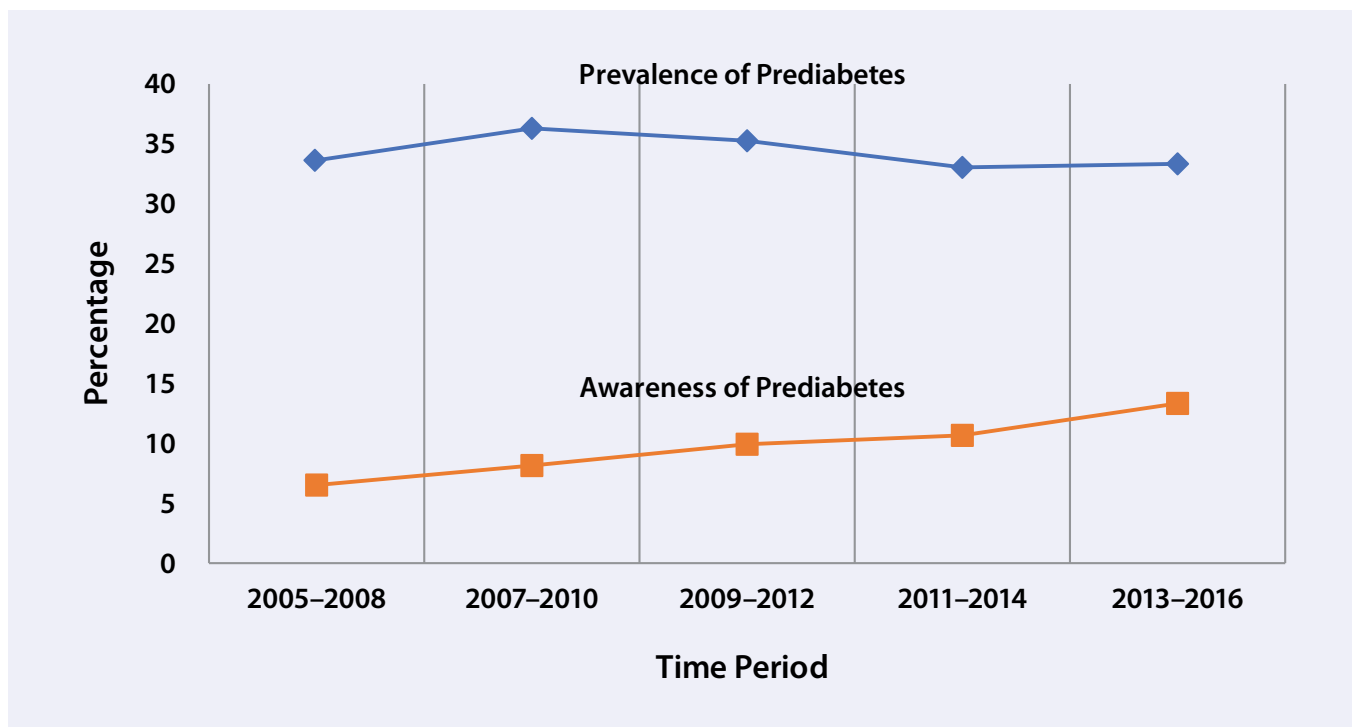
As of December 2019, about 3,650 DSMES services were offered across the United States. Forty-one states and the District of Columbia require that private health insurers cover DSMES services. Twenty-five states require coverage for all or nearly all Medicaid beneficiaries. Five states require DSMES coverage for Medicaid beneficiaries who are receiving benefits through managed care organizations. Four states require coverage under other specific conditions (e.g., limited to specific populations or to beneficiaries with Alternative Benefit Plans).<sup>18</sup>

Although ADA-recognized and ADCES-accredited DSMES services are offered in 56% of counties across the United States, 62% of rural counties do not have DSMES services.<sup>17</sup>

When a person has prediabetes, their blood sugar levels are higher than normal but not high enough for a diabetes diagnosis. Prediabetes can increase a person’s risk of developing type 2 diabetes, heart disease, and stroke. CDC estimates that 88 million, or 1 in 3, US adults aged 18 years or older had prediabetes in 2018. This number includes about 35 million adults aged 45 to 64 years and 24 million aged 65 years or older. Although an estimated one-third of US adults

had prediabetes in 2018, only 15.3% were aware of it. Trends in the prevalence of prediabetes among US adults remained constant from 2005 to 2016. However, the percentage with prediabetes who had ever been told by a health care professional that they had prediabetes (awareness) has doubled (Figure 6).<sup>12</sup> Table 2 shows the percentage of US adults by state or US territory who said they had ever been told by a health care professional that they had prediabetes.

**Figure 6. Trends in Age-Adjusted Prevalence and Awareness of Prediabetes Among US Adults Aged 18 Years or Older, 2005–2016**



Notes: Prediabetes awareness was based on self-report and estimated only among adults with prediabetes. Prediabetes was defined as fasting plasma glucose values of 100–125 mg/dL or hemoglobin A1C values of 5.7%–6.4%. Time periods overlap and are moving averages, with two survey periods each. Figure adapted from CDC’s *National Diabetes Statistics Report 2020*.  
Data source: CDC’s National Health and Nutrition Examination Survey, 2005–2016.

**Table 2. Percentage of US Adults Who Had Ever Been Told by a Health Care Professional That They Had Prediabetes, 2016**

State or Territory	Percentage
<b>Median<sup>a</sup></b>	<b>7.4</b>
Alabama	6.7
Alaska	10.5
Arizona <sup>b</sup>	7.6
Arkansas <sup>c</sup>	5.4
California <sup>b</sup>	8.2
Colorado <sup>b</sup>	6.3
Connecticut	7.3
Delaware	10.8
District of Columbia	10.8
Florida	8.7
Georgia <sup>d</sup>	6.8
Guam	15.6
Hawaii <sup>b</sup>	14.0
Idaho	7.3
Illinois	7.3
Indiana <sup>b</sup>	6.4
Iowa	6.5
Kansas	6.5
Kentucky	7.7
Louisiana	6.9
Maine	7.4
Maryland <sup>b</sup>	8.4
Massachusetts	7.2
Michigan <sup>b</sup>	6.8
Minnesota <sup>b</sup>	6.2
Mississippi	6.9
Missouri <sup>b</sup>	6.9
Montana <sup>c</sup>	5.8
Nebraska	5.6
Nevada	9.5
New Hampshire <sup>c</sup>	5.5
New Jersey <sup>b</sup>	7.4
New Mexico	9.0
New York	8.1
North Carolina <sup>d</sup>	7.2
North Dakota <sup>b</sup>	6.1

State or Territory	Percentage
Ohio	6.7
Oklahoma	7.4
Oregon	8.8
Pennsylvania <sup>b</sup>	6.0
Puerto Rico	9.6
Rhode Island <sup>b</sup>	5.7
South Carolina	7.5
South Dakota	6.4
Tennessee <sup>d</sup>	7.3
Texas	9.7
Utah <sup>c</sup>	5.7
Vermont <sup>b</sup>	4.8
US Virgin Islands	10.8
Virginia	9.0
Washington <sup>b</sup>	7.0
West Virginia	8.5
Wisconsin	6.5
Wyoming <sup>b</sup>	5.5

Note: Percentages are age-adjusted to the 2000 US standard population.

Data sources: CDC's United States Diabetes Surveillance System and Behavioral Risk Factor Surveillance System.

<sup>a</sup> State median calculated with 2016 data only.

<sup>b</sup> Data from 16 states are from 2014 because 2015 and 2016 data were not available.

<sup>c</sup> Data from 4 states are from 2013 because 2014, 2015, and 2016 data were not available.

<sup>d</sup> Data from 3 states are from 2015 because 2016 data were not available.

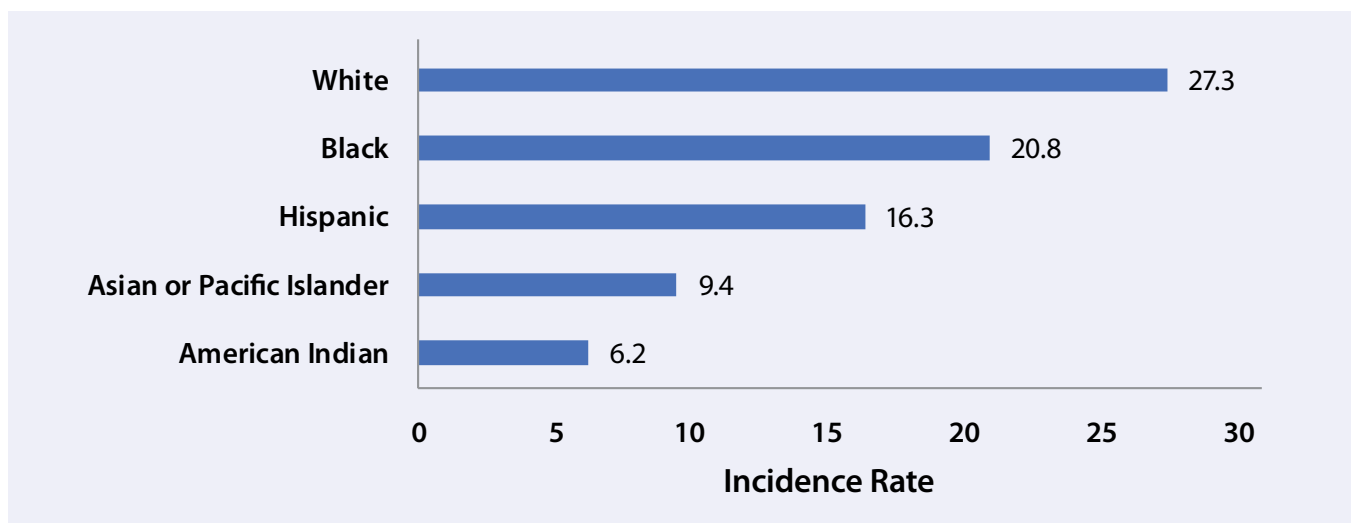
Of the estimated 26.9 million people with diagnosed diabetes in 2018, about 210,000 were children and adolescents younger than age 20 years.<sup>12</sup> The increasing frequency of both type 1 and type 2 diabetes in young people is a growing clinical and public health concern. Since 2000, CDC and the National Institutes of Health have funded the [SEARCH for Diabetes in Youth Study](#) to learn more about type 1 and type 2 diabetes and diabetes-related complications among children and young adults in the United States.

Findings from the SEARCH study indicate that the incidence of both type 1 and type 2 diabetes increased from 2002 to 2015. For type 1 diabetes, the annual percentage change (APC) was 1.9%, with 14,638 children and adolescents younger than age 20 years newly diagnosed.

Although the number of new cases of type 1 diabetes was highest among whites, the APC in the number of new cases during 2002–2015 was higher for all other racial and ethnic groups. The sharpest increase was among Asians or Pacific Islanders (4.4%), Hispanics (4.0%), and blacks (2.7%).<sup>19</sup> Figure 7 shows the incidence of type 1 diabetes among children and adolescents younger than age 20 years by racial or ethnic group during 2014–2015. Incidence of type 1 diabetes was higher among whites than among racial and ethnic minority groups.



**Figure 7. Incidence of Type 1 Diabetes per 100,000 Persons Among Children and Adolescents Younger Than Age 20 Years, by Racial or Ethnic Group, United States, 2014–2015**

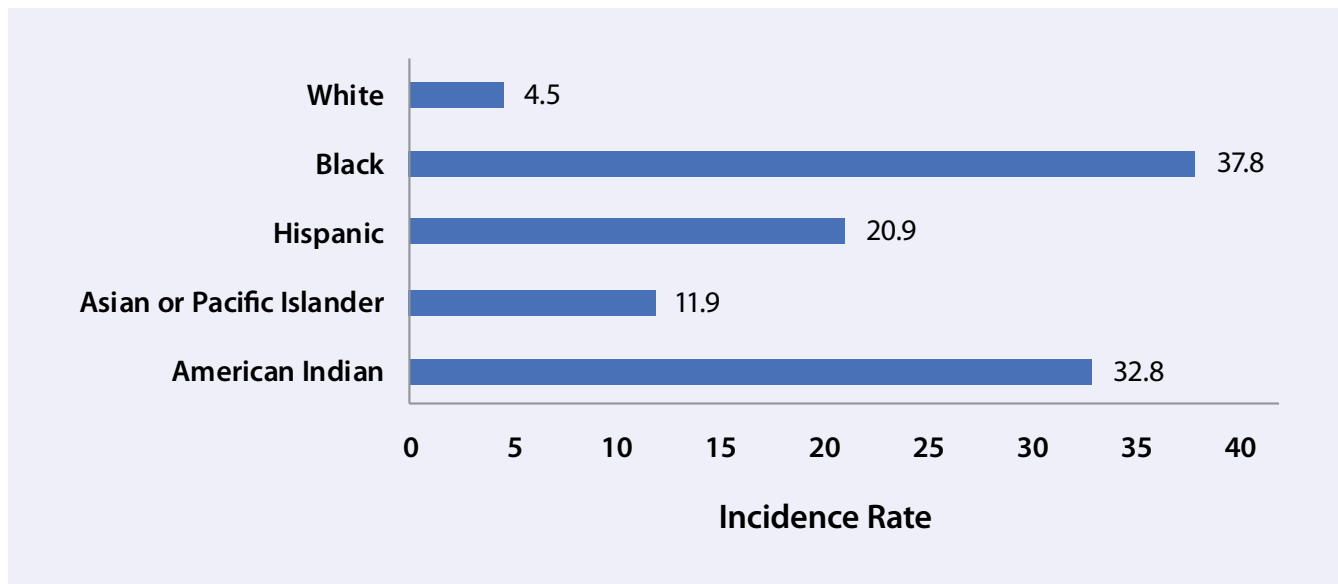


Note: American Indian youth who participated in the SEARCH study are not representative of all American Indian youth in the United States. Therefore, these rates cannot be generalized to all American Indian youth nationwide.  
Data source: SEARCH for Diabetes in Youth Study.

Similarly, for type 2 diabetes, the highest APC was seen among Asians or Pacific Islanders (7.7%), Hispanics (6.5%), and blacks (6.0%) during 2002–2015. During this period, 3,916 children and adolescents younger than age 20 years were newly diagnosed with type 2 diabetes, with an overall APC of 4.8% per year.<sup>19</sup>

Figure 8 shows the incidence of type 2 diabetes among those younger than age 20 years by racial and ethnic group during 2014–2015. Incidence of type 2 diabetes was significantly higher among racial and ethnic minority groups than among whites.

**Figure 8. Incidence of Type 2 Diabetes per 100,000 Persons Among Children and Adolescents Aged 10–19 Years, by Racial or Ethnic Group, United States, 2014–2015**



Note: American Indian youth who participated in the SEARCH study are not representative of all American Indian youth in the United States. Therefore, these rates cannot be generalized to all American Indian youth nationwide.  
Data source: SEARCH for Diabetes in Youth Study.

Findings from the SEARCH study indicate that the prevalence of both type 1 and type 2 diabetes increased among young people during 2001–2009. In 2001, the prevalence was 1.48 cases per 1,000 young people for type 1 diabetes and 0.34 cases per 1,000 for type 2 diabetes. In 2009, the prevalence increased to 2.55 per 1,000 young people for type 1 diabetes and 0.46 cases per 1,000 for type 2 diabetes.<sup>20</sup>

The SEARCH study also found that deaths from diabetes among all US children and adolescents aged 1 to 19 years decreased, from 265 during 2000–2002

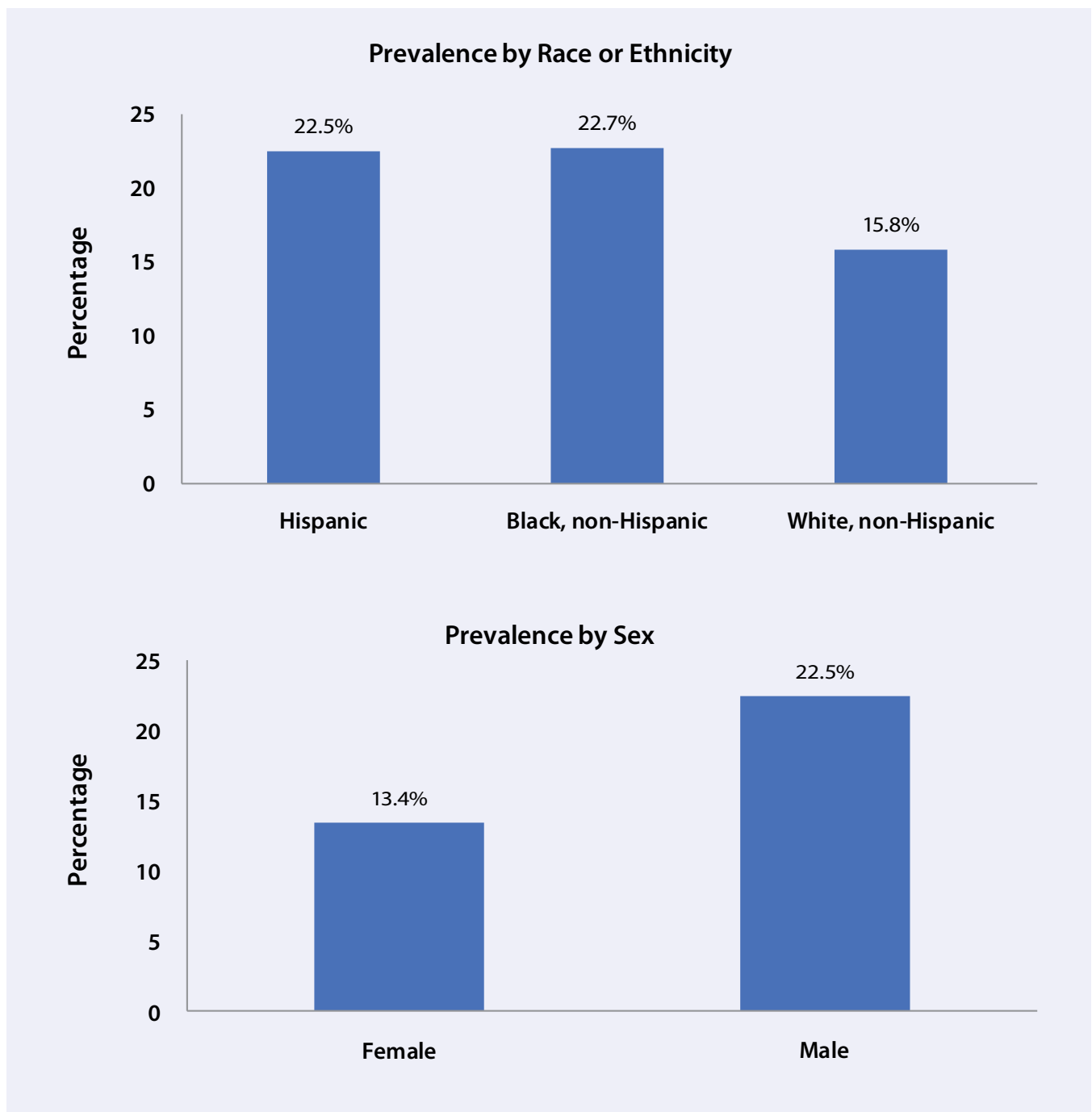
to 228 during 2012–2014. Although diabetes deaths among children and adolescents decreased over time, the death rate among non-Hispanic black children and adolescents was about twice that of non-Hispanic white children and adolescents during 2012–2014.

Additional research to identify health care factors and behaviors that contribute to diabetes deaths among children and adolescents may help public health officials understand the reasons for differences by race or ethnicity. This information could help them target future prevention efforts more effectively.<sup>21</sup>

The prevalence of prediabetes is increasing among US adolescents aged 12–18 years and young adults aged 19–34 years, which puts them at increased risk of developing diabetes and cardiovascular disease. A recent study found that 18% of US adolescents (1 in 5) and 24% of young adults (1 in 4) had prediabetes during 2005–2016.<sup>22</sup>

Adolescent boys aged 12 to 18 years have a significantly higher prevalence of prediabetes (22.5%) than girls (13.4%) in the same age group (Figure 9). Adolescents with obesity (25.7%) have a higher prevalence than those with normal weight (16.4%). Prevalence among non-Hispanic black (22.7%) and Hispanic (22.5%) adolescents is higher than among non-Hispanic white (15.8%) adolescents.<sup>22</sup>

**Figure 9. Prediabetes Prevalence Among US Adolescents Aged 12–18 Years by Racial and Ethnic Group and by Sex**





# PREVENTIVE CARE PRACTICES

Diabetes-related complications can be serious, costly, and deadly. They include heart disease, stroke, kidney disease and kidney failure, blindness, and amputations of the legs and feet. Diabetes-related complications are more likely and more severe among people whose diabetes is not well managed and those who have had diabetes longer.

People with diabetes can better manage their condition and improve their health by following evidence-based preventive care practices recommended by ADA.<sup>23</sup> These practices include getting regular A1C tests and annual foot and eye exams, attending diabetes self-management classes (DSMES), and monitoring their blood sugar level every day. Table 3 presents estimates of the percentage of US adults aged 18 years or older with diagnosed diabetes who reported following ADA's recommended preventive care practices.

**Table 3. Percentage of US Adults Aged 18 Years or Older With Diagnosed Diabetes Who Reported Following Recommended Preventive Care Practices, 2016**

State or Territory	Two or More A1C Tests in the Last Year	Foot Exam by Health Professional in the Last Year	Ever Attended a Diabetes Self-Management Class	Dilated Eye Exam in the Last Year	Daily Self-Monitoring of Blood Sugar
Alabama	66.6	60.1	57.1	57.1	67.7
Alaska <sup>a</sup>	62.2	76.1	59.0	57.4	68.3
Arizona <sup>b</sup>	66.8	66.0	49.9	61.5	64.1
Arkansas <sup>c</sup>	NA	NA	NA	NA	NA
California <sup>b</sup>	63.9	62.9	64.5	59.7	42.7
Colorado <sup>b</sup>	63.2	67.9	54.4	61.1	55.6
Connecticut <sup>b</sup>	74.8	72.8	47.7	64.6	61.1
Delaware	66.7	69.5	55.3	76.1	50.0
District of Columbia	76.3	69.9	58.4	70.0	64.6
Florida <sup>b</sup>	74.4	52.4	45.2	62.1	62.2
Georgia <sup>b</sup>	63.5	65.2	52.9	65.6	61.3
Guam	59.2	66.9	43.4	52.5	42.9
Hawaii <sup>b</sup>	73.4	74.4	58.4	68.6	51.7
Idaho <sup>c</sup>	NA	NA	NA	NA	NA
Illinois <sup>b</sup>	67.9	74.2	61.4	61.5	70.2
Indiana <sup>b</sup>	73.1	70.6	59.2	49.8	64.2
Iowa <sup>b</sup>	78.7	79.3	65.2	64.1	65.9
Kansas <sup>b</sup>	71.4	69.6	59.8	64.6	58.7
Kentucky <sup>b</sup>	74.5	69.3	50.0	61.2	64.5
Louisiana	56.0	63.3	47.2	55.8	49.6
Maine <sup>a</sup>	77.3	80.8	59.3	60.6	60.7
Maryland <sup>b</sup>	75.4	75.7	59.0	61.9	65.9
Massachusetts	66.3	68.5	42.5	62.7	64.8
Michigan <sup>b</sup>	65.7	71.6	60.0	62.9	64.3
Minnesota <sup>b</sup>	75.4	81.4	69.1	74.4	64.8
Mississippi	72.2	69.6	42.5	56.3	69.0

Table 3 continued on next page

**Table 3 Continued**

State or Territory	Two or More A1C Tests in the Last Year	Foot Exam by Health Professional in the Last Year	Ever Attended a Diabetes Self-Management Class	Dilated Eye Exam in the Last Year	Daily Self-Monitoring of Blood Sugar
Missouri <sup>c</sup>	NA	NA	NA	NA	NA
Montana <sup>b</sup>	72.8	82.7	63.1	58.2	41.6
Nebraska <sup>b</sup>	69.1	66.0	59.5	61.9	59.5
Nevada <sup>b</sup>	69.6	74.1	74.0	65.3	75.9
New Hampshire <sup>b</sup>	80.0	86.4	60.2	66.6	58.4
New Jersey	75.4	64.5	38.7	69.1	52.4
New Mexico <sup>b</sup>	73.6	75.9	48.1	61.2	65.5
New York <sup>b</sup>	77.3	71.5	34.8	67.0	56.1
North Carolina <sup>b</sup>	80.2	77.6	62.5	61.6	65.5
North Dakota <sup>a</sup>	66.1	82.7	66.8	58.0	68.0
Ohio	71.8	73.2	51.9	62.2	58.1
Oklahoma	74.7	73.9	56.9	63.8	65.0
Oregon <sup>c</sup>	NA	NA	NA	NA	NA
Pennsylvania <sup>b</sup>	73.3	81.0	50.5	69.0	63.7
Puerto Rico	63.0	35.1	26.8	50.9	65.5
Rhode Island <sup>b</sup>	80.3	76.8	56.8	60.7	70.9
South Carolina <sup>b</sup>	69.2	63.9	54.1	56.5	62.1
South Dakota	74.9	74.7	59.8	64.1	60.9
Tennessee <sup>b</sup>	67.2	60.0	48.8	52.6	65.2
Texas	63.8	70.3	59.8	62.2	55.6
Utah <sup>b</sup>	69.8	71.2	60.4	57.9	60.4
Vermont <sup>b</sup>	71.6	72.8	45.7	66.7	67.5
US Virgin Islands	63.6	66.2	32.9	34.8	57.4
Virginia	75.6	73.8	57.4	64.1	63.0
Washington <sup>b</sup>	71.4	74.2	63.1	58.7	63.0
West Virginia <sup>a</sup>	77.9	70.1	54.6	54.8	71.1
Wisconsin	78.4	83.2	62.7	57.5	60.5
Wyoming	69.7	65.5	55.4	64.8	70.3

Note: Percentages are age-adjusted to the 2000 US standard population.

Data source: CDC's United States Diabetes Surveillance System and Behavioral Risk Factor Surveillance System.

<sup>a</sup> Data for 4 states are from 2014 because 2015 and 2016 data were not available.

<sup>b</sup> Data for 29 states are from 2015 because 2016 data were not available.

<sup>c</sup> Data for Arkansas, Idaho, Missouri, and Oregon were not available (NA) for 2014, 2015, or 2016.

Healthy People 2020, which sets national objectives for improving the health of all Americans, monitors progress toward increasing the percentage of people with diagnosed diabetes who follow preventive care practices. Table 4 shows the Healthy People 2020 targets for each practice and the all-states median percentages for each practice during 2011–2016.

**Table 4. Healthy People 2020 Targets and All-States Median Percentages of US Adults Aged 18 Years or Older With Diagnosed Diabetes Who Reported Following Recommended Preventive Care Practices, 2011–2016**

Year	Two or More A1C Tests in the Last Year	Foot Exam by Health Professional in the Last Year	Ever Attended a Diabetes Self-Management Class	Dilated Eye Exam in the Last Year	Daily Self-Monitoring of Blood Sugar
<b>Healthy People 2020 Target</b>	<b>72.9</b>	<b>76.7</b>	<b>62.5</b>	<b>58.7</b>	<b>72.5</b>
2011	68.8	70.8	56.3	<b>60.1</b>	64.2
2012	69.1	69.1	55.3	<b>59.7</b>	63.5
2013	67.3	69.2	55.8	<b>59.5</b>	64.1
2014	68.0	68.0	55.3	<b>58.8</b>	63.5
2015	71.4	71.6	54.4	<b>61.6</b>	63.0
2016	69.7	69.5	55.3	<b>62.2</b>	60.9

Notes: Percentages are age-adjusted to the 2000 US standard population. Percentages in bold met or exceeded the Healthy People 2020 target.

Data sources: CDC’s United States Diabetes Surveillance System and Behavioral Risk Factor Surveillance System.

Dilated eye exams were the only recommended practice that consistently met or exceeded the Healthy People 2020 target during 2011–2016. The lowest percentage was for ever attending a diabetes self-management class. DSMES can increase the use of preventive care practices, help improve quality of life for people with diabetes, and reduce health care costs by lowering the risk of complications.<sup>24</sup> However,

barriers such as not having insurance coverage, having insurance with high co-payments, and living in a rural area can make it hard for some people to participate in DSMES.<sup>17</sup> More research may help find new ways to overcome the challenges that prevent people from accessing DSMES services and address gaps in diabetes preventive care.<sup>17</sup>

## Additional Diabetes Resources

- The [United States Diabetes Surveillance System](#) is an interactive web application that provides national, state, and county diabetes data. Users can view the data in the form of customized maps, charts, or tables on desktop and mobile devices.
- The [Healthy People 2020 Diabetes website](#) provides information about diabetes-specific objectives and recommended practices as part of the nation’s 10-year health agenda.
- The [National Diabetes Statistics Report](#) is a CDC publication that provides updated statistics about diabetes in the United States for a scientific audience.



CDC works to prevent or delay type 2 diabetes by leading the [National Diabetes Prevention Program](#) (National DPP). The National DPP is a partnership of public and private organizations working together to build the infrastructure for nationwide delivery of an evidence-based lifestyle change program for adults with prediabetes to prevent or delay the onset of type 2 diabetes. Participating organizations include employers, insurers, community-based organizations, nonprofits, academic institutions, and federal, state, and local governments.

Policy changes that allow health care delivery and payment systems to interact with community organizations and service delivery networks have been shown to help build a sustainable system to deliver an effective lifestyle change program.<sup>25</sup>

The National DPP lifestyle change program is based on the Diabetes Prevention Program research study and subsequent translation studies. These studies showed that making realistic behavior changes helped people with prediabetes lose 5% to 7% of their body weight and reduce their risk of developing type 2 diabetes by 58% (71% for people older than age 60).<sup>26</sup>

The program is group-based and is led by a trained lifestyle coach. The CDC-approved curriculum can be delivered in-person, online, through distance learning, or through a combination of these delivery modes. The curriculum:

- Supports regular interaction between the lifestyle coach and participants.
- Builds peer support.
- Focuses on helping people eat healthier, be more physically active and reduce stress.

CDC also manages the Diabetes Prevention Recognition Program (DPRP), which is the quality assurance arm of the National DPP. The DPRP awards CDC recognition to organizations that have demonstrated their ability to effectively deliver the lifestyle change program and achieve the outcomes proven to prevent or delay onset of type 2 diabetes. The DPRP is the only centralized source of performance data for organizations delivering the National DPP lifestyle change program.

# NATIONAL DIABETES PREVENTION PROGRAM

As of December 2019, over 1,500 organizations had been recognized by CDC to deliver the lifestyle change program in all 50 states. More than 425,000 people at high risk of type 2 diabetes had participated. Participants whose data have been evaluated lost an average of 5.5% of their body weight.

With technical assistance support from CDC, state health departments and other partners have secured health insurance coverage for the National DPP for close to 4 million public employees and dependents in 20 states. Over 100 commercial insurance companies and self-insured employers also provide some form of coverage for their plan members or employees with prediabetes.

In March 2016, the Centers for Medicare & Medicaid Services (CMS) certified the expansion of the National DPP lifestyle change program into Medicare. The new Medicare Diabetes Prevention Program (MDPP) became the first preventive service model from the

Center for Medicare & Medicaid Innovation to be eligible for Medicare coverage—a landmark for public health. CDC worked closely with CMS throughout the rulemaking process and revised the DPRP Standards to require preliminary or full recognition for organizations that want to supply MDPP services. CMS coverage of the MDPP took effect in 2018.

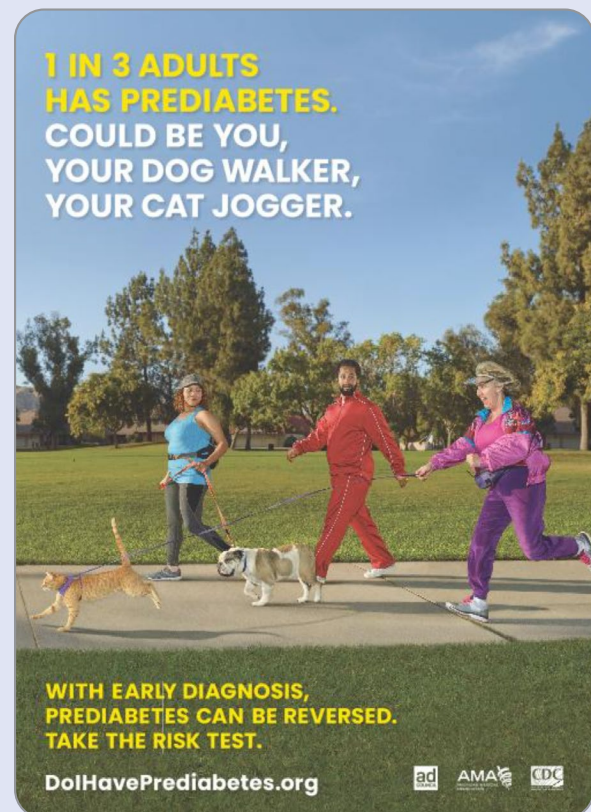
As of December 2019, 185 CDC-recognized program delivery organizations had enrolled as MDPP suppliers. These organizations reported a total of 760 locations (312 administrative locations, 448 community locations). In addition to Medicare coverage, 11 states (California, Delaware, Maryland, Minnesota, Montana, New Jersey, New York, Oregon, Pennsylvania, Vermont, and Wyoming) include the National DPP lifestyle change program as a covered health benefit for eligible Medicaid beneficiaries and are in various stages of implementation.

In 2016, the [Do I Have Prediabetes](#) campaign was launched to raise awareness about prediabetes across the nation. Witty and engaging public service announcements distributed through thousands of media outlets encourage people to take a 1-minute online test to learn their risk of prediabetes.

People with high scores are directed to see their doctor to confirm the result. The website also provides links to a CDC-recognized [lifestyle change program](#), part of the [National DPP](#). The Do I Have Prediabetes campaign was developed by CDC, ADA, the American Medical Association, and the Ad Council. It is one of the Ad Council's most successful campaigns and has been extended through 2021.<sup>27</sup>

As of December 2019, a total of 2.7 million people had taken the prediabetes risk test. The campaign also documented 3 million unique visitors to its website, 3.7 million video views, and 113,000 visits to the National DPP website to find a lifestyle change program.

Since the campaign began, awareness of the term “prediabetes” increased from 50% in 2015 to 66% in 2019 among people in the target audience who speak English. Among Spanish speakers, awareness rose from 53% to 80%.



CDC and its partners have developed several tools to help employers, insurers, health care providers, and states assess the effect of diabetes on their communities and populations of interest. These tools can be used to calculate the economic costs of the disease, evaluate the benefits of offering the National DPP lifestyle change program, and review existing policies related to education and management of diabetes.

## United States Diabetes Surveillance System

CDC developed and manages the online [United States Diabetes Surveillance System](#) (USDSS). This system is used by public health planners, policy makers, health care systems, and community-based public health practitioners to track and respond to trends in diabetes at national, state, and local levels.

The USDSS monitors incidence and prevalence of diabetes, risk factors, care practices, and complications using various national surveys. These surveys include the National Health and Nutrition Examination Survey, the National Health Interview Survey, and the Behavioral Risk Factor Surveillance System (BRFSS). The USDSS also includes data on chronic kidney disease and end-stage renal disease from the United States Renal Data System.

An interactive web application allows users to view the latest data on any device, from desktops to smartphones, and produce a wide variety of reports, datasets, and slides.<sup>28</sup>

## Diabetes State Burden Toolkit

The [Diabetes State Burden Toolkit](#) provides state estimates of diabetes burden (prevalence, incidence, and related conditions), economic costs, and deaths. It also presents data about diabetes-related complications; healthy life years lost; and costs related to medical care, absence from work, and lost household productivity.<sup>29</sup>

## Diabetes Prevention Impact Toolkit

CDC developed the [Diabetes Prevention Impact Toolkit](#) to help employers, insurers, and state health departments estimate the health and economic savings of offering the National DPP lifestyle change program to populations at risk of developing type 2 diabetes.<sup>30</sup>

## DSMES Toolkit

The [DSMES Toolkit](#) provides a comprehensive set of resources and tools to support the development, promotion, implementation, and sustainability of DSMES services.<sup>31</sup>



## National Diabetes Prevention Program

The National DPP has a variety of resources, including the following:

### National DPP Coverage Toolkit

The [National DPP Coverage Toolkit](#) was developed to support Medicaid, Medicare Advantage, commercial health plans, and employers that are considering covering or implementing the National DPP lifestyle change program.<sup>32</sup>

### National DPP Registry of Recognized Organizations

The National DPP [Registry of Recognized Organizations](#) lists CDC-recognized organizations that deliver the National DPP lifestyle change program in communities across the United States. Preliminary or full recognition is required to supply services as part of the MDPP.<sup>33</sup>

### National DPP Customer Service Center

CDC created the [National DPP Customer Service Center](#) to address the increasing demand for technical assistance and training from stakeholders involved in delivering, promoting, or referring people to the National DPP lifestyle change program.

This online “one-stop shop” allows organizations to access centralized resources, request personalized technical assistance, and participate in discussions with other members of the National DPP community. It provides articles, recorded webinars, and answers to frequently asked questions. Organizations in need of more help can also submit technical assistance requests through the website or by e-mail.<sup>34</sup>

## Rx for the National DPP: Action Guide for Community Pharmacists

The publication [Rx for the National DPP: Action Guide for Community Pharmacists](#) is designed to help community pharmacists and members of the pharmacy workforce get involved in the National DPP. It is framed around

the following three tiers of engagement: (1) promoting awareness of prediabetes and the National DPP; (2) screening, testing, and referring people with prediabetes to CDC-recognized program delivery organizations; and (3) delivering the program at the pharmacies.<sup>35</sup>

## Chronic Kidney Disease Surveillance System

The [Chronic Kidney Disease \(CKD\) Surveillance System](#) provides a range of data on CKD in the United States, including prevalence and incidence, risk factors, and quality of health care. It was created by CDC, in collaboration with the University of California at San Francisco and the University of Michigan. The system also includes data that can be used to monitor kidney disease objectives for Healthy People 2020.<sup>36</sup>

## Vision and Eye Health Surveillance System

The [Vision and Eye Health Surveillance System \(VEHSS\)](#) provides data to help health professionals, researchers, policy makers, and patients understand the scope of vision loss, eye disorders, and eye care services in the United States. It was developed by CDC and NORC at the University of Chicago.

CDC used VEHSS data to create [state profiles](#) of the impact of vision impairment and comorbid conditions across the United States. The profiles provide state-level data from the BRFSS and the American Community Survey, as well as county-level maps for each state that show the prevalence of self-reported severe vision impairment.<sup>37</sup>

Website addresses of nonfederal organizations are provided solely as a service to readers. Provision of an address does not constitute an endorsement of this organization by CDC or the federal government, and none should be inferred. CDC is not responsible for the content of other organizations' web pages.

The estimates in this report were calculated by staff from CDC’s Division of Diabetes Translation and are available in more detail in CDC’s *National Diabetes Statistics Report 2020* and from the USDSS. Diabetes data are from the US Census Bureau, the Indian Health Service’s National Data Warehouse, the SEARCH for Diabetes in Youth Study, and various surveys and data collection systems. These systems include the BRFSS, the National Health Interview Survey, the National Health and Nutrition Examination Survey, the National Hospital Discharge Survey, and the National Vital Statistics System.

To make meaningful comparisons between states and over time, we used the US Census Bureau’s 2000 US standard population to age-adjust our estimated rates. Age adjustment is a statistical process applied to rates of diseases, injuries, and health outcomes. It allows comparisons between communities with different age structures because it proportions rates to a standard age structure. Three-year moving averages are sometimes used to improve the precision of estimates. State estimates in this report card are based on BRFSS data. Because of the limitations of self-reported data in surveys, these estimates may underreport the rates of diagnosed diabetes and prediabetes in the US population.

1. Centers for Disease Control and Prevention. Division of Diabetes Translation website. Diabetes Report Card. <https://www.cdc.gov/diabetes/library/reports/reportcard.html>. Accessed November 19, 2019.
2. Patient Protection and Affordable Care Act of 2009. Pub. L No. 111-148, Title X, Sec 10407, 42 USC 247b-9a.
3. Giovannucci E, Harlan DM, Archer MC, et al. *Diabetes and cancer: a consensus report*. *Diabetes Care*. 2010;33(7):1674–1685.
4. Dolan C, Glynn R, Griffin S, et al. *Brain complications of diabetes mellitus: a cross-sectional study of awareness among individuals with diabetes and the general population in Ireland*. *Diabet Med*. 2018;35(7):871–879.
5. American Diabetes Association. *Economic costs of diabetes in the U.S. in 2017*. *Diabetes Care*. 2018;41:917–928.
6. National High Blood Pressure Education Program. *The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure*. Bethesda, MD: National Heart, Lung, and Blood Institute; 2004.
7. Daniel MJ. *Lipid management in patients with type 2 diabetes*. *Am Health Drug Benefits*. 2011;4:312–322.
8. Murchison AP, Hark L, Pizzi LT, et al. *Non-adherence to eye care in people with diabetes*. *BMJ Open Diabetes Res Care*. 2017;5(1):e000333.
9. Lewis EJ, Hunsicker LG, Clarke WR, et al; Collaborative Study Group. *Renoprotective effect of the angiotensin-receptor antagonist irbesartan in patients with nephropathy due to type 2 diabetes*. *N Engl J Med*. 2001;345:851–860.
10. Geiss LS, Li Y, Hora I, et al. *Resurgence of diabetes-related nontraumatic lower-extremity amputation in the young and middle-aged adult US population*. *Diabetes Care*. 2019;42(1):50–54.
11. Bardenheier BH, Lin J, Zhuo X, et al. *Disability-free life -years lost among adults aged ≥50 years with and without diabetes*. *Diabetes Care*. 2016;39(7):1222–1229.
12. Centers for Disease Control and Prevention. *National Diabetes Statistics Report 2020: Estimates of Diabetes and Its Burden in the United States*. Atlanta, GA: Centers for Disease Control and Prevention, US Dept of Health and Human Services; 2020.
13. Benoit SR, Hora I, Albright AL, Gregg EW. *New directions in incidence and prevalence of diagnosed diabetes in the USA*. *BMJ Open Diab Res Care*. 2019;7:e000657.
14. Cheng YJ, Kanaya AM, Araneta MR, et al. *Prevalence of diabetes by race and ethnicity in the United States, 2011–2016*. *JAMA*. 2019;322(24):2389–2398.
15. Beckles GL, Chou C. *Disparities in the prevalence of diagnosed diabetes — United States, 1999–2002 and 2011–2014*. *MMWR Morb Mortal Wkly Rep*. 2016;65(45):1265–1269.
16. Luo H, Beckles GL, Zhang X, Sotnikov S, Thompson T. *The relationship between county-level contextual characteristics and use of diabetes care services*. *J Public Health Manag Pract*. 2014;20(4):401–410.
17. Rutledge SA, Masalovich S, Blacher RJ, Saunders MM. *Diabetes self-management education programs in nonmetropolitan counties — United States, 2016*. *MMWR Surveill Summ*. 2017;66(10):1–6.



18. ChangeLab Solutions. *A Key Tool in Health Care: Diabetes Self-Management Education and Training (DSME/T). National Landscape: Background, Benefits, and Insurance Coverage of DSME/T*. Oakland, CA: ChangeLab Solutions; 2016.
19. Divers J, Mayer-Davis EJ, Lawrence JM, et al. Trends in incidence of type 1 and type 2 diabetes among youths — selected counties and Indian reservations, United States, 2002–2015. *MMWR Morb Mortal Wkly Rep*. 2020;69:161–165.
20. Dabelea D, Mayer-Davis EJ, Saydah S, et al. Prevalence of type 1 and type 2 diabetes among children and adolescents from 2001 to 2009. *JAMA*. 2014;311(17):1778–1786.
21. Saydah S, Imperatore G, Cheng Y, Geiss LS, Albright A. Disparities in diabetes deaths among children and adolescents — United States, 2000–2014. *MMWR Morb Mortal Wkly Rep*. 2017;66(19):502–505.
22. Andes LJ, Cheng YJ, Rolka DB, Gregg EW, Imperatore G. Prevalence of prediabetes among adolescents and young adults in the United States, 2005–2016. *JAMA Pediatrics*. 2019:e194498.
23. Introduction: standards of medical care in diabetes—2020. *Diabetes Care*. 2020;43(1):S1–S2.
24. Powers MA, Bardsley J, Cypress M, et al. Diabetes self-management education and support in type 2 diabetes: a joint position statement of the American Diabetes Association, the American Association of Diabetes Educators, and the Academy of Nutrition and Dietetics. *J Acad Nutr Diet*. 2015;115(8):1323–1334.
25. Burd C, Gruss S, Albright A, et al. Translating knowledge into action to prevent type 2 diabetes: Medicare expansion of the National Diabetes Prevention Program lifestyle intervention. *Milbank Q*. 2020;98(1): 172–196.
26. Diabetes Prevention Program Research Group. Reduction in the incidence of type 2 diabetes with lifestyle intervention or metformin. *N Engl J Med*. 2002;346(6):393–403.
27. New prediabetes awareness campaign features unexpected animal videos to encourage Americans to learn their risk [news release]. New York, NY: Ad Council; July 25, 2017.
28. Centers for Disease Control and Prevention. US Diabetes Surveillance System website. <https://gis.cdc.gov/grasp/diabetes/DiabetesAtlas.html>. Accessed May 21, 2019.
29. Centers for Disease Control and Prevention. Diabetes State Burden Toolkit website. <https://nccd.cdc.gov/Toolkit/DiabetesBurden>. Accessed November 20, 2019.
30. Centers for Disease Control and Prevention. Diabetes Prevention Impact Toolkit website. <https://nccd.cdc.gov/Toolkit/DiabetesImpact>. Accessed November 20, 2019.
31. Centers for Disease Control and Prevention. Diabetes Self-Management Education and Support Toolkit website. <https://www.cdc.gov/diabetes/dsmes-toolkit>. Accessed November 20, 2019.
32. National Association of Chronic Disease Directors. National Diabetes Prevention Program Coverage Toolkit website. <https://coveragetoolkit.org/>. Accessed November 20, 2019.
33. Centers for Disease Control and Prevention. National Diabetes Prevention Program website. Registry of All Recognized Organizations. [https://nccd.cdc.gov/DDT\\_DPRP/Registry.aspx](https://nccd.cdc.gov/DDT_DPRP/Registry.aspx). Accessed November 20, 2019.
34. Centers for Disease Control and Prevention. National Diabetes Prevention Program Customer Service Center website. <https://nationaldppcsc.cdc.gov/s/>. Accessed February 10, 2020.
35. Centers for Disease Control and Prevention. CDC-Recognized Lifestyle Change Program website. How Pharmacists Can Participate. <https://www.cdc.gov/diabetes/prevention/lifestyle-program/deliverers/pharmacists.html>. Accessed November 20, 2019.
36. Centers for Disease Control and Prevention. Chronic Kidney Disease (CKD) Surveillance System website. <https://nccd.cdc.gov/ckd/default.aspx>. Accessed November 20, 2019.
37. Centers for Disease Control and Prevention. Vision Health Initiative website. State Profiles. <https://www.cdc.gov/visionhealth/data/state-profiles/index.htm>. Accessed November 20, 2019.

**Figure 1.** This horizontal line graph shows the incidence trend of diagnosed diabetes among US adults aged 18 years or older from 2000 to 2018. The vertical Y-axis is the rate per 1,000 persons and ranges from 1 to 10. The horizontal X-axis is the time period. Incidence rates increased steadily from 6.2 in 2000 to 9.3 in 2009, and then declined from 7.7 in 2010 to 6.7 in 2018. (Page 3)

**Figure 2.** This horizontal line graph uses 3 lines to show the prevalence trends of diagnosed diabetes, undiagnosed diabetes, and total diabetes among US adults aged 18 years or older from 1999 to 2016. The vertical Y-axis presents percentages from 0% to 14% in increments of 2. The horizontal X-axis presents the time period in 2-year spans. Prevalence of diagnosed diabetes increased from 6.1% in 1999–2000 to 9.7% in 2015–2016. Prevalence of undiagnosed diabetes remained steady, ranging from 2.7% in 1999–2000 to 3.5% in 2001–2002 and 3.3% in 2009–2010, and then returning to 2.8% in 2015–2016. Prevalence of total diabetes increased from 8.8% in 1999–2000 to 12.5% in 2015–2016. (Page 4)

**Figure 3.** This horizontal bar graph shows the percentage of US adults aged 18 years or older with diagnosed diabetes by racial or ethnic group from 2017 to 2018. The vertical Y-axis lists 5 racial and ethnic groups in the United States. The horizontal X-axis presents percentages from 0% to 20% in increments of 5. American Indians or Alaska Natives had the highest age-adjusted rates at 14.7%, followed by Hispanics at 12.5%, non-Hispanic blacks at 11.7%, Asians at 9.2%, and non-Hispanic whites at 7.5%. (Page 6)

**Figure 4.** This horizontal bar graph shows the percentage of US adults aged 18 years or older with diagnosed diabetes by education level from 2017 to 2018. The vertical Y-axis lists 3 education levels. The horizontal X-axis presents percentages from 0% to 15% in increments of 5. Percentages were higher among adults with less than a high school education at 13.3%, followed by those with a high school education at 9.7%, and those with more than high school education at 7.5%. (Page 6)

**Figure 5.** Three US maps show the county-level distribution of diagnosed diabetes prevalence among US adults aged 20 years or older in 2004, 2008, and 2016. Prevalence percentages are divided into 5 categories: 1.5% to 6.9%, 7.0% to 8.4%, 8.5% to 9.8%,

9.9% to 12.1%, and 12.2% to 33.0%. The maps show that prevalence has increased steadily over time, with many more counties in the highest rate category in the 2016 map compared to the 2004 and 2008 maps. (Page 8)

**Figure 6.** This horizontal line graph uses 2 lines to show the prevalence and awareness trends of prediabetes among US adults aged 18 years or older from 2005 to 2016. The vertical Y-axis presents percentages from 0% to 40% in increments of 5. The horizontal X-axis presents the time period in 3-year spans. Prevalence remained constant, ranging from 33.6% in 2005–2008 to 33.3% in 2013–2016. Awareness doubled, from 6.5% in 2005–2008 to 13.3% in 2013–2016. (Page 10)

**Figure 7.** This horizontal bar graph shows the incidence of type 1 diabetes among US children and adolescents younger than age 20 years by racial or ethnic group from 2014 to 2015. The vertical Y-axis lists 5 racial and ethnic groups in the United States. The horizontal X-axis presents rates per 100,000 persons from 0 to 30 in increments of 5. Incidence was higher among whites at 27.3, followed by blacks at 20.8, Hispanics at 16.3, Asians or Pacific Islanders at 9.4, and American Indians at 6.2. (Page 12)

**Figure 8.** This horizontal bar graph shows the incidence of type 2 diabetes among US children and adolescents aged 10 to 19 years by racial or ethnic group from 2014 to 2015. The vertical Y-axis lists 5 racial and ethnic groups in the United States. The horizontal X-axis presents rates per 100,000 persons from 0 to 40 in increments of 5. Incidence was significantly higher among racial and ethnic minority groups compared to whites. Rates were 37.8 for blacks, 32.8 for American Indians, 20.9 for Hispanics, 11.9 for Asians or Pacific Islanders, and 4.5 for whites. (Page 13)

**Figure 9.** Two vertical bar graphs show the prediabetes prevalence among US adolescents aged 12 to 18 years by race or ethnicity and by sex. In the first graph, the vertical Y-axis presents percentages from 0% to 25% in increments of 5. The horizontal X-axis lists female and male. Prevalence was higher among males at 22.5% than among females at 13.4%. In the second graph, the vertical Y-axis presents percentages from 0% to 25% in increments of 5. The horizontal X-axis lists 3 racial and ethnic groups. Prevalence was higher among non-Hispanic blacks at 22.7% and Hispanics at 22.5% than among non-Hispanic whites at 15.8%. (Page 14)