



TEXAS DIABETES  
COUNCIL

## Texas Diabetes Fact Sheet

### I. Adult Prediabetes Prevalence, 2009

According to the 2009 Behavioral Risk Factor Surveillance System (BRFSS) survey, 984,142 persons aged eighteen years and older in Texas (5.4% of this age group) have prediabetes. Nationwide, 14 million persons in this age group have been diagnosed with prediabetes (5.9%).<sup>1</sup> These data are self-reported, requiring that respondents already be diagnosed by a physician or other health professional to report that they have prediabetes. Respondents to the annual BRFSS phone survey are asked the following question:

*Have you ever been told by a doctor or other health professional that you have prediabetes or borderline diabetes?*

The National Health and Nutrition Examination Survey (NHANES) and other national data sets, combining interviews with clinical testing, reveal a much higher estimate of prediabetes prevalence in the U.S. In 2005 to 2008, 35 percent of U.S. adults aged 20 years or older had prediabetes, and 50 percent of adults aged 65 years or older had prediabetes. Applying this percentage to the entire U.S. population in 2010 yields an estimated 79 million American adults aged 20 years or older with prediabetes.<sup>2</sup>

According to the 2009 Texas BRFSS, prevalence of prediabetes among adults did not differ significantly when compared among gender and race/ethnicity subpopulations. Prevalence was higher among those with higher levels of education, which may be reflective of greater awareness of prediabetes among those with more education. Prevalence of prediabetes was significantly higher among adults 45-64 years (7.5%) and 65+ years old (7.1%) as compared to adults 30-44 years old (4.1%).

#### Diagnosed Prediabetes Prevalence, Texas Adults<sup>1</sup>

		<u>95% CI</u>
Male:	<b>4.9%</b>	(3.9-6.1%)
Female:	<b>5.9%</b>	(5.1-6.9%)

#### Diagnosed Prediabetes Prevalence by Race/Ethnicity, Texas Adults<sup>1</sup>

		<u>95% CI</u>
White, non-Hispanic:	<b>5.2%</b>	(4.6-6.0%)
Black, non-Hispanic:	<b>6.7%</b>	(4.6-9.8%)
Hispanic:	<b>4.9%</b>	(3.7-6.5%)
Other:	<b>8.0%</b>	(4.2-14.6%)

### **Diagnosed Prediabetes Prevalence by Age Group, Texas Adults<sup>1</sup>**

		<b><u>95% CI</u></b>
18-29 Years:	<b>3.0%</b>	(1.6-5.3%)
30-44 Years:	<b>4.1%</b>	(3.1-5.4%)
45-64 Years:	<b>7.5%</b>	(6.4-8.9%)
65+:	<b>7.1%</b>	(5.7-8.8%)

### **Diagnosed Prediabetes Prevalence by Race/Ethnicity and Age Group, Texas Adults<sup>1</sup>**

Age Group	White, non-Hispanic (95%CI)	Black, non-Hispanic (95% CI)	Hispanic (95% CI)	Other (95% CI)	All Races (95%CI)
18 – 44	<b>2.7%</b> (1.9-4.0%)	<b>4.4%</b> (2.1-9.0%)	<b>4.0%</b> (2.7-5.9%)	<b>7.2%</b> (2.7-18.1%)	<b>3.7%</b> (2.8-4.8%)
45 – 64	<b>7.0%</b> (5.9-8.3%)	<b>8.9%</b> (5.9-13.2%)	<b>7.3%</b> (4.6-11.3%)	<b>11.5%</b> (5.2-23.9%)	<b>7.5%</b> (6.4-8.9%)
65+	<b>7.4%</b> (6.2-8.9%)	<b>11.2%</b> (4.2-26.6%)	<b>4.7%</b> (2.9-7.5%)	<b>4.4%</b> (1.1-16.5%)	<b>7.1%</b> (5.7-8.8%)

### **Diagnosed Prediabetes Prevalence by Educational Level, Texas Adults<sup>1</sup>**

		<b><u>95% CI</u></b>
No High School Diploma:	<b>3.0%</b>	(2.0-4.7%)
High School Graduate:	<b>5.0%</b>	(3.9-6.4%)
Some College:	<b>6.5%</b>	(5.2-8.2%)
College +:	<b>5.9%</b>	(4.7-7.3%)

## **II. Adult Diabetes Prevalence, 2009**

In the U.S., an estimated 21.2 million (9.1%) persons eighteen years and older have been diagnosed with diabetes.<sup>1</sup>

According to the 2009 BRFSS, an estimated 1.7 million persons aged eighteen years and older in Texas (9.3% of this age group) have been diagnosed with diabetes.<sup>1</sup> Another estimated 440,468 persons aged eighteen years and older in Texas are believed to have undiagnosed diabetes (based on 2003-2006 NHANES age-adjusted prevalence estimate of 2.5% of persons twenty years of age and older).<sup>3</sup>

According to the 2009 Texas BRFSS, prevalence of diabetes did not differ significantly between males and females. Prevalence of diagnosed diabetes significantly increased with age. About 1 in 20 adults in age group 30-44 years had diabetes as compared to 4 in 20 adults in age group 65 years and older.

Adults with college or higher level education showed significantly lower prevalence of diabetes (7.1%) as compared to adults with high school diploma (10.2%) or without high school diploma (11.2%).

The overall prevalence of diabetes among blacks (non-Hispanic - 14.4%) was significantly higher than whites (non-Hispanic - 8%). Combining analysis by age and race/ethnicity shows the age groups where differences in diabetes prevalence among race/ethnicity subgroups are more pronounced. Among forty-five to sixty-four year olds, diabetes prevalence was higher among Hispanics and blacks (non-Hispanic) than among whites (non-Hispanic). This difference becomes increasingly evident as persons age, with the greatest disparity seen in older Texans (65+).

**Diagnosed Diabetes Prevalence by Sex, Texas Adults<sup>1</sup>**

		<b><u>95% CI</u></b>
Male:	<b>10.0%</b>	(8.6-11.5%)
Female:	<b>8.6%</b>	(7.8-9.6%)

**Diagnosed Diabetes Prevalence by Race/Ethnicity, Texas Adults<sup>1</sup>**

		<b><u>95% CI</u></b>
White, non-Hispanic:	<b>8.0%</b>	(7.2-8.9%)
Black, non-Hispanic:	<b>14.4%</b>	(11.0-18.7%)
Hispanic:	<b>9.7%</b>	(8.1-11.5%)
Other:	<b>9.2%</b>	(5.7-14.5%)

**Diagnosed Diabetes Prevalence by Age Group, Texas Adults<sup>1</sup>**

		<b><u>95% CI</u></b>
18-29 Years:	<b>0.7%</b>	(0.2-2.6%)
30-44 Years:	<b>5.2%</b>	(3.8-7.1%)
45-64 Years:	<b>13.7%</b>	(12.2-15.3%)
65+:	<b>20.7%</b>	(18.7-22.9%)

**Diagnosed Diabetes Prevalence by Race/Ethnicity and Age, Texas Adults<sup>1</sup>**

Age Group	White, non-Hispanic (95%CI)	Black, non-Hispanic (95% CI)	Hispanic (95% CI)	Other (95% CI)
18 – 44	<b>2.1%</b> (1.3-3.5)	<b>6.3%</b> (2.8-13.7)	<b>4.5%</b> (2.9-7.0)	<b>4.1%</b> (1.3-12.2)
45 – 64	<b>11.0%</b> (9.5-12.6)	<b>20.9%</b> (14.7-28.9)	<b>16.8%</b> (13.6-20.6)	<b>15.0%</b> (7.9-26.5)
65+	<b>16.5%</b> (14.6-18.6)	<b>29.6%</b> (20.8-40.1)	<b>30.6%</b> (24.6-37.2)	<b>25.1%</b> (13.1-42.9)

**Diagnosed Diabetes Prevalence by Educational Level, Texas Adults<sup>1</sup>**

		<b><u>95% CI</u></b>
No High School Diploma:	<b>11.2%</b>	(9.2-13.7%)
High School Graduate:	<b>10.2%</b>	(8.7-11.9%)
Some College:	<b>10.3%</b>	(8.4-12.5%)
College +:	<b>7.1%</b>	(6.0- 8.4%)

### III. Diabetes Prevalence Among Youth (less than 18 years of age)

Diabetes among children and adolescents is mainly type 1. The SEARCH for Diabetes in Youth study funded by the Centers for Disease Control and Prevention and the National Institutes of Health indicated that, during 2002–2005, 15,600 youth in the U.S. were newly diagnosed with type 1 diabetes annually, and 3,600 youth were newly diagnosed with type 2 diabetes annually.<sup>2</sup>

Among youth aged <10 years, the rate of new cases was 19.7 per 100,000 each year for type 1 diabetes and 0.4 per 100,000 for type 2 diabetes. Among youth aged 10 years or older, the rate of new cases was 18.6 per 100,000 for type 1 diabetes and 8.5 per 100,000 for type 2 diabetes.<sup>2</sup>

In 2007, the Texas BRFSS survey began including two questions regarding diabetes prevalence among youth. In households that include a child or adolescent, respondents are now asked if the child or adolescent has been diagnosed with diabetes, and if so, what type of diabetes they have (type 1 or type 2). While response to the question regarding type of diabetes has not been adequate to provide a reliable estimate of prevalence by type, the 2009 survey indicates that an estimated **26,000** Texas youth (**0.4%** of this age group) have been diagnosed with diabetes (type 1 and type 2).<sup>1</sup> Diagnosed diabetes prevalence for Texas youth are presented by sex and race/ethnicity below. Differences are not statistically significant.

#### Diagnosed Diabetes Prevalence by Sex, Texas Youth, 2009<sup>1</sup>

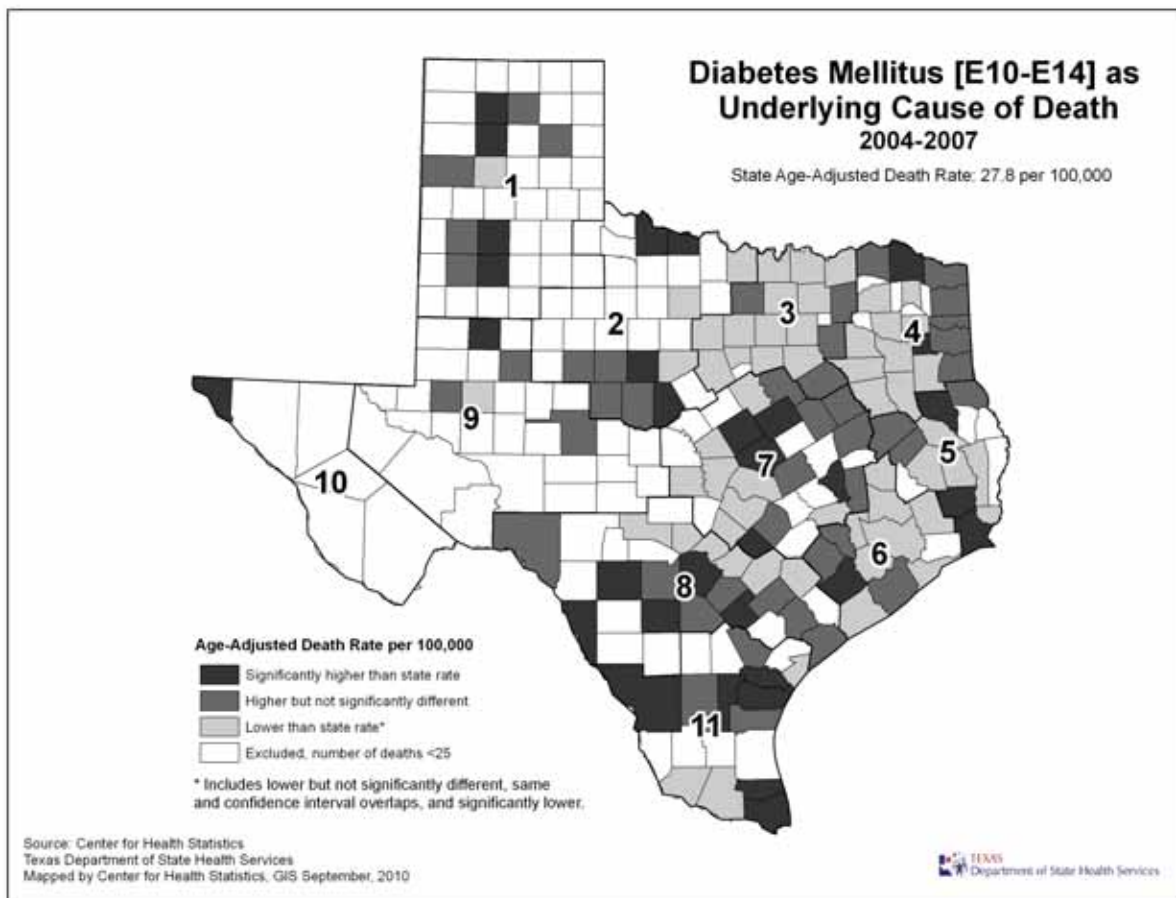
		<u>95% CI</u>
Boy:	<b>0.3%</b>	(0.1-0.9%)
Girl:	<b>0.5%</b>	(0.3-1.0%)

#### Diagnosed Diabetes Prevalence by Race/Ethnicity, Texas Youth, 2009<sup>1</sup>

		<u>95% CI</u>
White, non-Hispanic:	<b>0.4%</b>	(0.2-0.9%)
Black, non-Hispanic:	<b>1.0%</b>	(0.3-4.2%)
Hispanic:	<b>0.3%</b>	(0.1-0.7%)

### IV. Diabetes Mortality

Diabetes was the sixth leading cause of death in Texas in 2002 through 2007. In 2007, **5,105** deaths were directly attributed to diabetes. Nationally, diabetes was also the sixth leading cause of death in 2002 through 2004 and 2006, and was the seventh leading cause of death in 2005. Diabetes is believed to be under-reported on death certificates in Texas and the nation, both as a condition and as a cause of death.



The map above shows the age-adjusted mortality rates per 100,000 persons for Texas by county for the years 2004 through 2007, with diabetes as the underlying cause of death. The state rate for the four years is **27.8 per 100,000**. A number of counties in Health Service Regions 8 and 11 had significantly higher diabetes mortality rates than the state rate. Many counties along the eastern part of the state had higher diabetes mortality rates than the state, but these rates were not significantly different than the rate for the state as a whole.

### **Diabetes Mortality Rate (Per 100,000) by Race/Ethnicity, Texas, 2007<sup>4</sup>**

The 2007 diabetes mortality rate for Texas was 26 deaths per 100,000 persons. Mortality rates by race/ethnicity in 2007 were:

- 19 per 100,000 non-Hispanic whites
- 40 per 100,000 Hispanics
- 46 per 100,000 non-Hispanic blacks
- 22 per 100,000 persons who fall in the “Other” category

The 2007 mortality rates (per 100,000) for non-Hispanic blacks and Hispanics were more than double that of non-Hispanic whites.

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- <sup>1</sup> Source: 2009 Texas Behavioral Risk Factor Surveillance System, Statewide BRFSS Survey, for persons who are eighteen years of age and older. Data include both type 1 and type 2 diabetes. Persons with diabetes include those who report that they have been told by a doctor or other healthcare professional that they have diabetes. Persons with prediabetes include those who have been told by a doctor or other healthcare professional that they have prediabetes or borderline diabetes. Youth with diabetes include those whose parents or guardian have been told by a doctor, nurse, or other healthcare professional they have diabetes. Women who reported diabetes or prediabetes but only during pregnancy are counted as not having diabetes. Prevalence data for 2010 will be available in the spring of 2011 (Prevalence data are available for the year prior to the current year).
- <sup>2</sup> Centers for Disease Control and Prevention. National diabetes fact sheet: national estimates and general information on diabetes and prediabetes in the United States, 2011. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2011.
- <sup>3</sup> Persons 20 years of age and older. Centers for Disease Control and Prevention. Prevalence of Diabetes and Impaired Fasting Glucose in Adults, United States, 1999-2000. MMWR. September 5, 2003; 52(35);833-837.
- <sup>4</sup> Texas Department of State Health Services, Texas Vital Statistics. Data include male and female, and all ages.