

2013 Diabetes Snapshot Report



The state of diabetes in Arkansas

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Executive Summary

- ❖ **Mortality** - In 2010, diabetes was the 7th leading cause of death among Whites and the 4th among African Americans and Latinos. African Americans saw higher mortality rates due to diabetes compared to Whites and Latinos each year from 2008 – 2012, and lost more potential years of life to the disease. Generally speaking, death rates due to diabetes were higher among people living in the eastern portion of the state, with Mississippi County having the highest death rate (89.8 deaths per 100,000 people).
- ❖ **Morbidity** – Since 2001 a pattern has emerged in which African Americans show the highest rates of diabetes prevalence each year, while Latinos show the lowest rates and Whites fall in between. In 2010, the majority of counties in Arkansas reported prevalence rates between 5 and 10%. Clay County, in the northeast, reported the highest prevalence at 20.1%.
- ❖ **Risk Factors** – Arkansans generally show high prevalence rates of common risk factors for diabetes, such as obesity, tobacco use, lack of physical activity, high cholesterol, and hypertension. Compared to Whites, African Americans showed higher rates of tobacco use, Latinos and African Americans showed greater rates of obesity, and Latinos reported lower rates of cholesterol checks.
- ❖ **Financial Burden** – In 2011, more than 5,900 hospital discharges with a primary diagnosis of diabetes with complications resulted in over \$135 million in aggregate hospital charges in Arkansas. These discharges were the 10th most costly type among African Americans, the 18th among Whites, and the 20th among Latinos.

Introduction

Diabetes is a metabolic disorder characterized by the body's inability to process or respond to insulin.¹ In Type 1 Diabetes, the body makes little or no insulin, and insulin injections are required daily.¹ In Type 2 Diabetes, insulin isn't stored in cells appropriately and thus cannot be stored for energy.¹ Typically, Type 2 diabetes is diagnosed in adults, and is thought to largely be due to lifestyle factors.²

Nationally, an estimated 8% of the population, or 25.8 million people, have diabetes.² In Arkansas, the prevalence rate is estimated to be 9%.³ Diabetes is a considerable public health concern in Arkansas and elsewhere, due to its substantial prevalence rate, status as 7th leading cause of death in 2010, and comorbidity with other serious diseases, such as heart disease and stroke.³

Mortality

Source: CDC WISQARS⁴ & CDC WONDER⁵

Leading Causes of Death, 2010

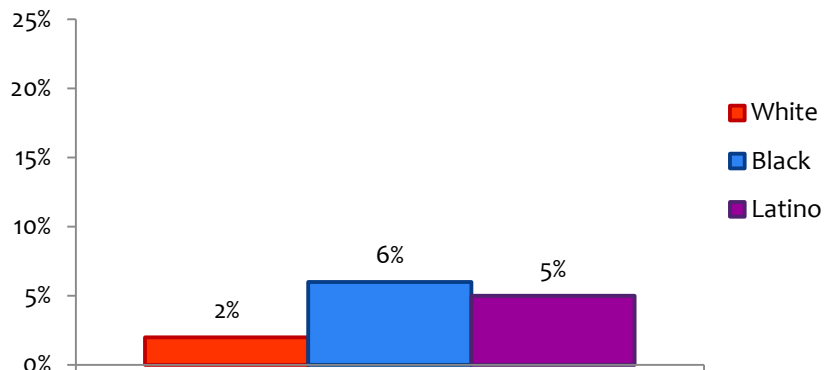
Rank	White		Black		Latino	
	Cause	Deaths	Cause	Deaths	Cause	Deaths
[1]	Heart Disease	6,262	Heart Disease	943	Cancer	44
[2]	Cancer	5,581	Cancer	813	Heart Disease	36
[3]	Chronic Lower Respiratory Disease	1,682	Stroke	253	Unintentional Injury	35
[4]	Stroke	1,471	Diabetes	219	Diabetes	12
[5]	Unintentional Injury	1,243	Unintentional Injury	170	Suicide	11
[6]	Alzheimer's Disease	873	Nephritis	168	Congenital Anomalies	10
[7]	Diabetes	612	Septicemia	89	Perinatal Period	10
[8]	Influenza & Pneumonia	581	Chronic Lower Respiratory Disease	84	Homicide	--
[9]	Nephritis	562	Homicide	84	Influenza & Pneumonia	--
[10]	Suicide	405	Alzheimer's Disease	76	Stroke	--

Examining the leading causes of death allows for meaningful comparisons of mortality among different groups. In 2010, diabetes was the 7th leading cause of death for Whites and the 4th leading cause for African Americans and Latinos.

Proportionate mortality rates measure deaths of a certain cause as a percentage of all deaths, allowing for comparisons across groups and causes. In 2010, diabetes accounted for only 2% of all White deaths, but 6% of African American deaths.

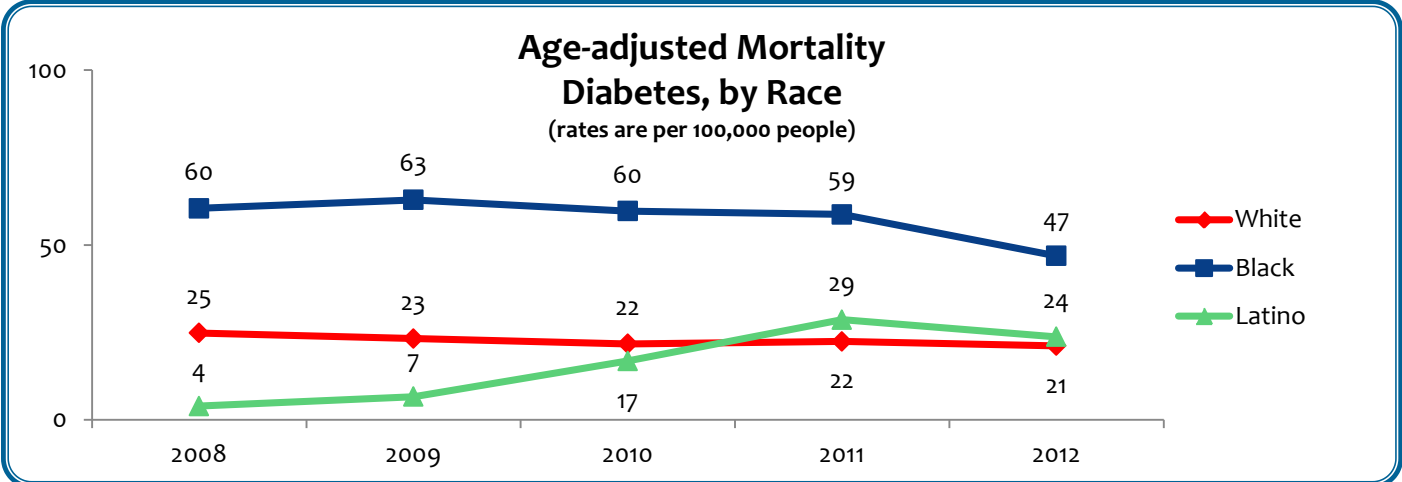
Proportionate Mortality of Diabetes, 2010

Diabetes deaths as a percentage of all deaths



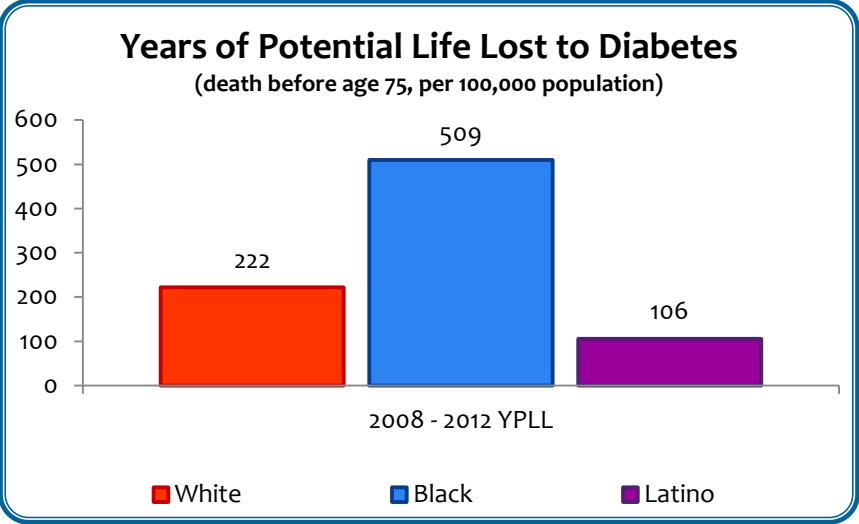
Mortality

Source: Arkansas Department of Health, Center for Health Statistics⁶



Mortality rates since 2008 provide a snapshot of deaths due to diabetes over time. Rates for African Americans are significantly higher than among Whites and Latinos. While Latinos ended 2009 with lower mortality rates than Whites and African Americans, over time their rates have increased to become more similar to those found in Whites.

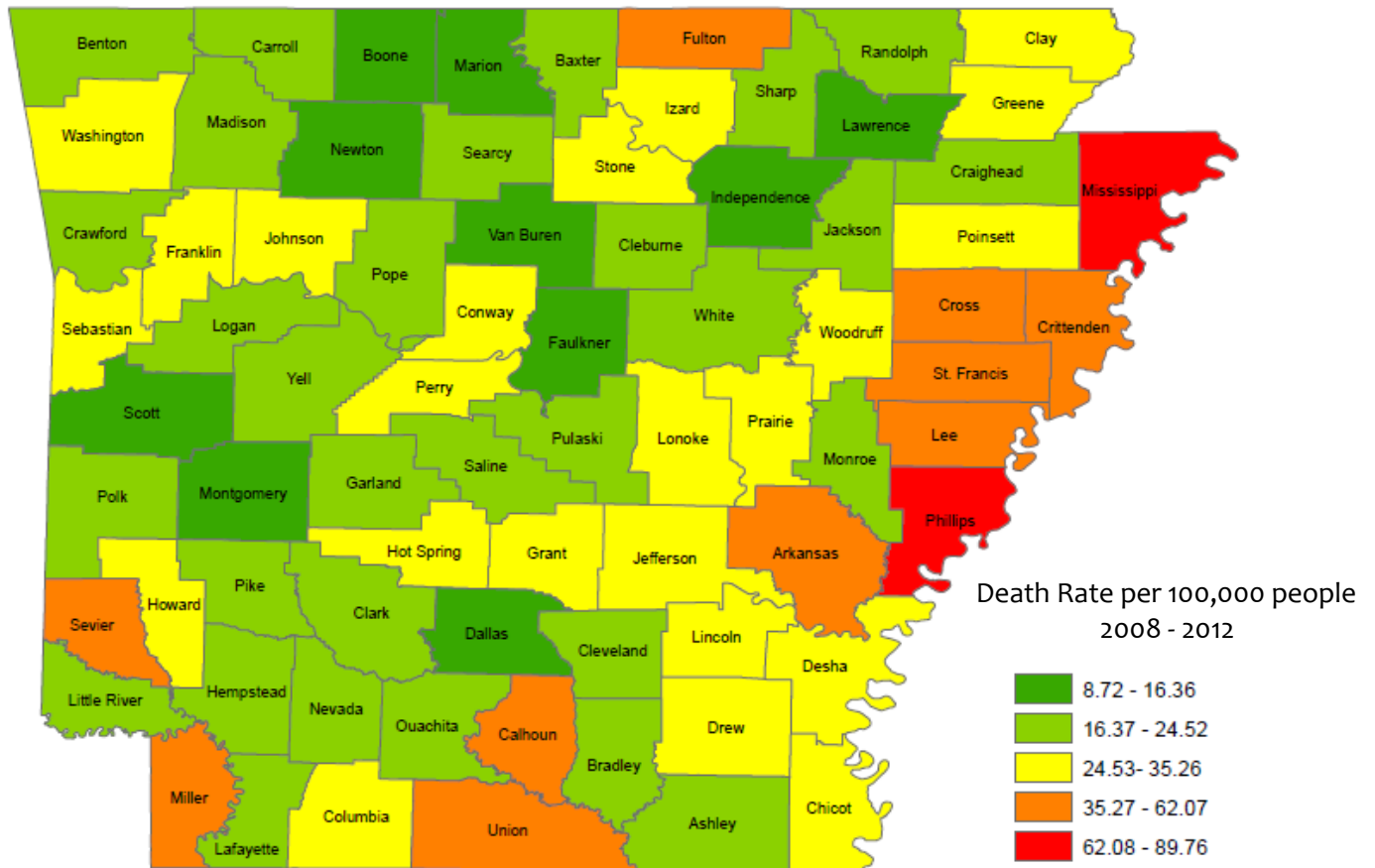
Years of potential life lost (YPLL) is a measure of premature death before age 75. Higher values indicate death due to the cause(s) at earlier ages (i.e., losing more years of life to the disease/condition). From 2008 to 2012, the African American YPLL value was significantly higher than that of Whites and Latinos.



Mortality

Source: Arkansas Department of Health, Center for Health Statistics⁶

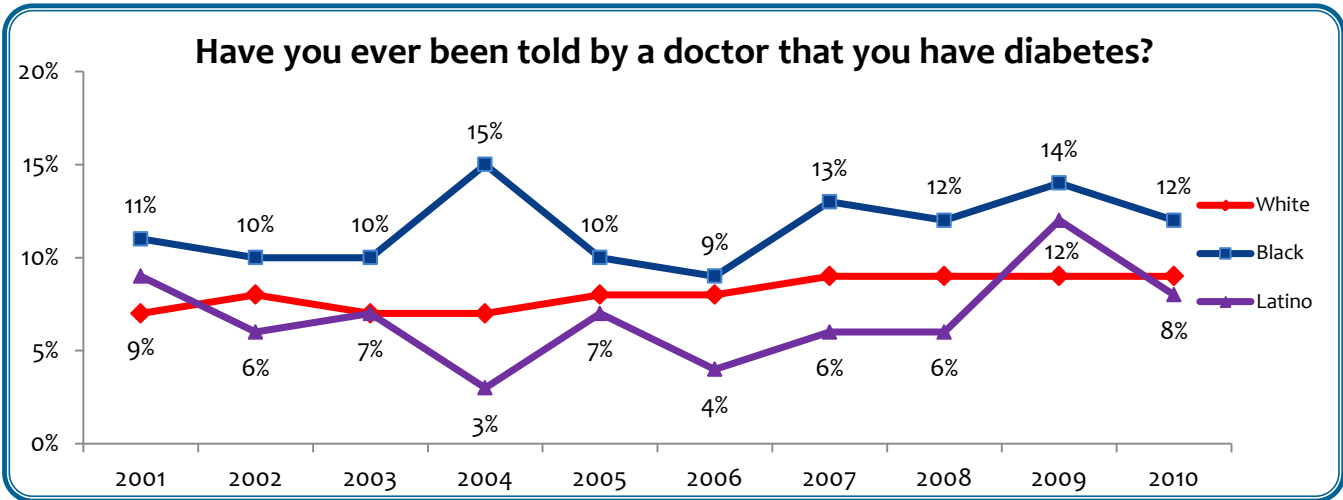
Diabetes Mortality Rates by County



From 2008 to 2012, the overall death rate for diabetes in Arkansas was 26.1 deaths per every 100,000 people. Diabetes mortality rates in Arkansas varied significantly by county during this time as well. Counties in the eastern portion of the state saw greater death rates due to diabetes compared to other portions of the state. Montgomery County, in the west central area of the state, had the lowest death rate in the state (8.7 deaths per 100,000 people). Mississippi County, in the northeastern area of the state, had the state's highest death rate due to diabetes (89.8 deaths per 100,000 people).

Morbidity

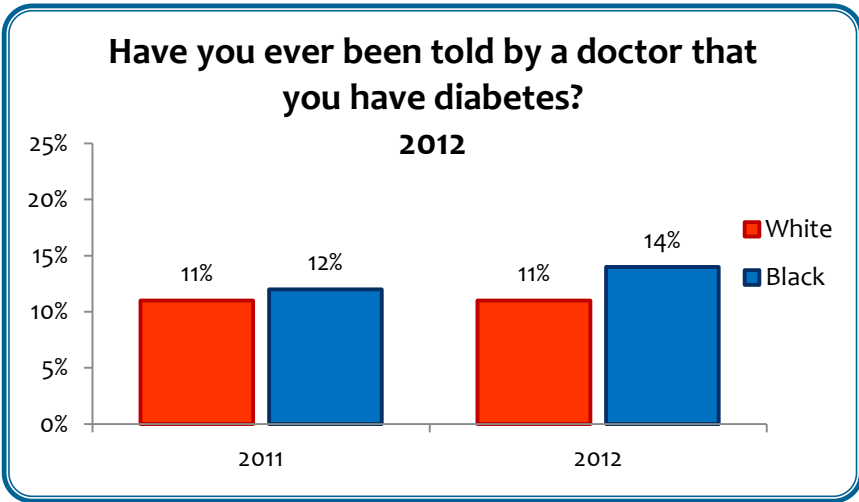
Source: Behavioral Risk Factor Surveillance System^{7*}



Since 2001, prevalence rates of diabetes have followed a somewhat consistent pattern. Each year, rates for African Americans have remained higher than those for Latinos, while rates for Whites have generally fallen between the two. Excluding 2004, which saw the most dramatic peak and valley in prevalence rates, most races/ethnic groups have seen little variation over time.

In 2011, African Americans had slightly higher rates of diabetes compared to Whites, but the rates were similar. In 2011, the rate for Whites remained the same but the rate for African Americans increased, broadening the gap between the two races' prevalence rates.

*Note: Changes in the BRFSS sampling methodologies in January 2011 make comparisons of data before and after this point inaccurate. Thus, data are presented separately here.



Risk Factors - Obesity

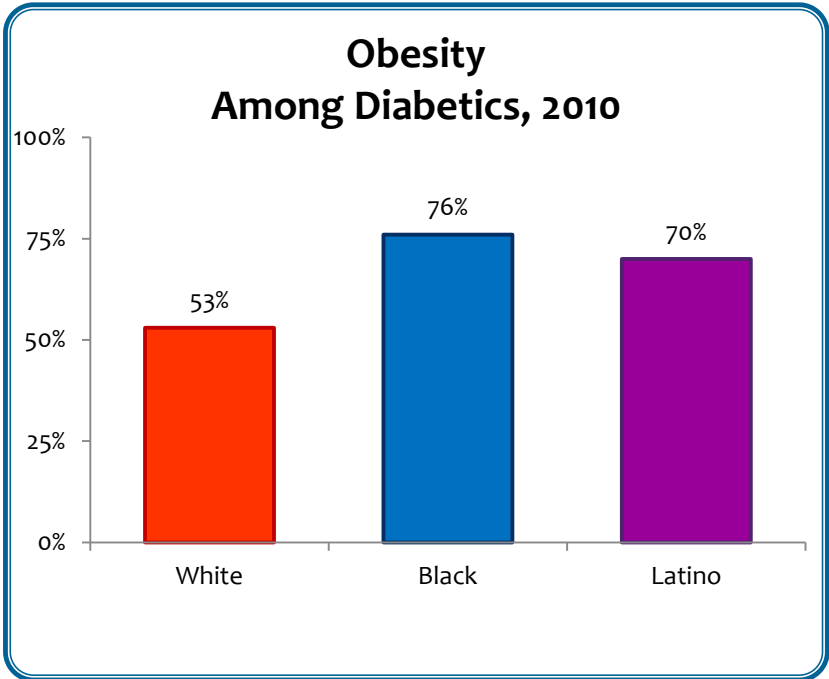
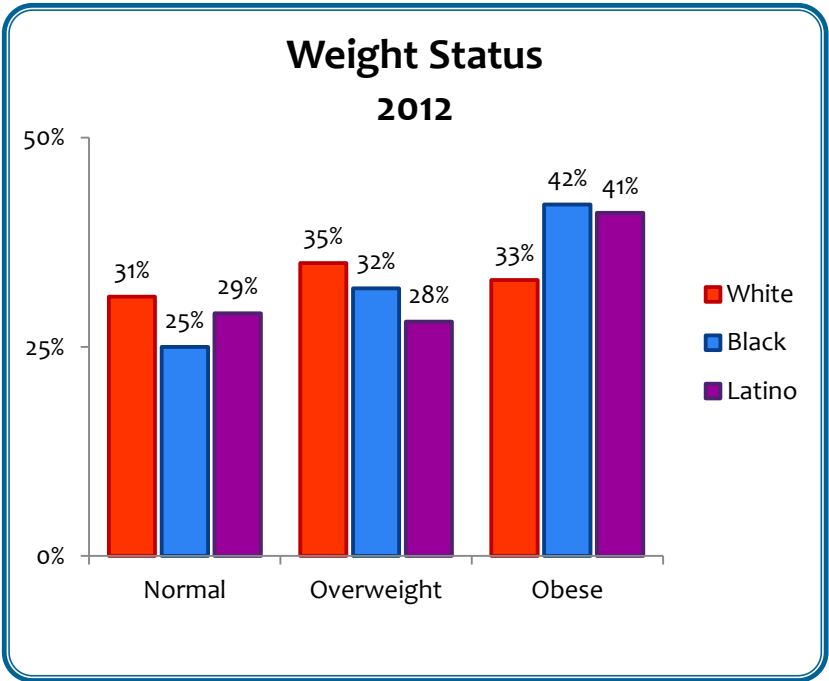
Source: Behavioral Risk Factor Surveillance System⁷



Obesity is one risk factor which increases the chance of developing diabetes.⁸

In 2012, a higher proportion of African Americans were obese compared to 31% of Whites and 19% of Latinos. In addition, African Americans and Latinos were more likely to be obese than they were likely to be overweight or normal weight.

Among diabetics alone, data show that obesity is highly prevalent for each racial/ethnic group.



Risk Factors - Tobacco Use

Source: Behavioral Risk Factor Surveillance System⁷

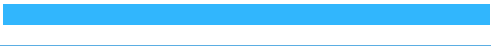
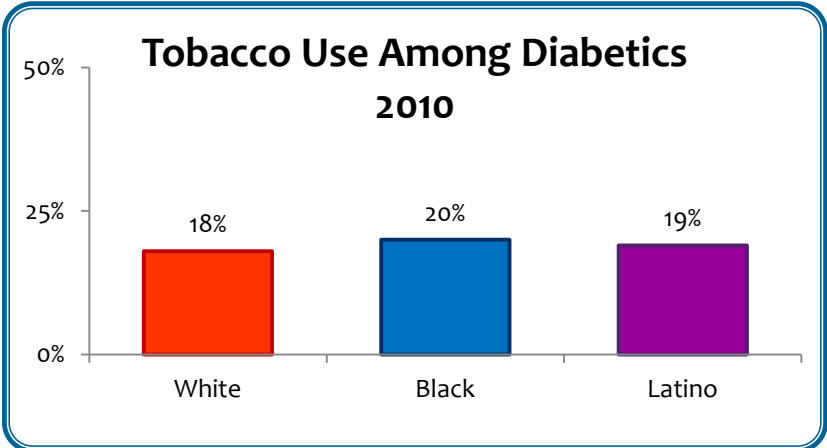
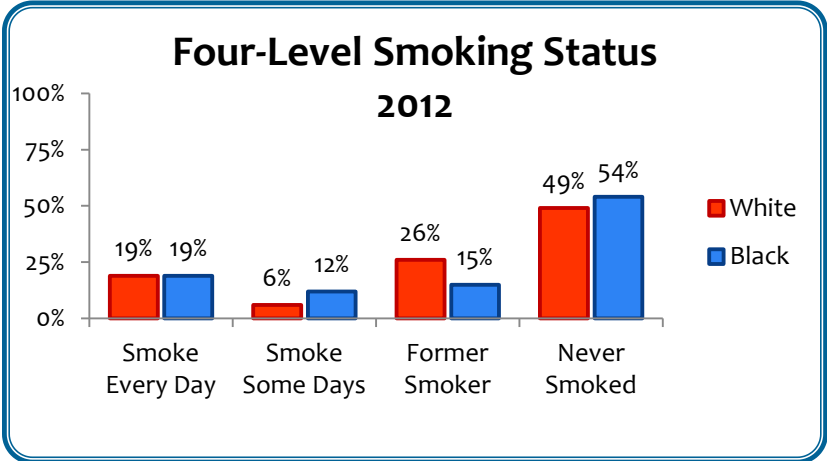
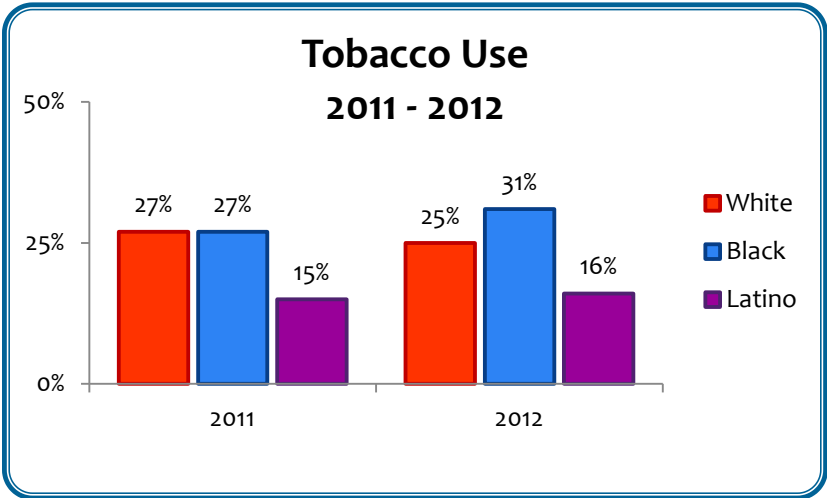


Tobacco use is another risk factor for diabetes.⁹

In 2011, rates of tobacco use were similar among both Whites and African Americans, and both rates were significantly higher than the rate among Latinos. In 2012, however, the tobacco use rate increased among African Americans to 31%, resulting in a rate significantly higher than both Whites and Latinos.

In 2012, the proportion of people who reported smoking daily was similar among both Whites and African Americans. However, a higher proportion of African Americans reported smoking 'some days,' and a higher proportion of Whites reported being former rather than current smokers compared to African Americans.

In 2010, about one in five diabetics also reported being current smokers. This rate was consistent among Whites, African Americans, and Latinos.



Risk Factors - Lack of Physical Activity

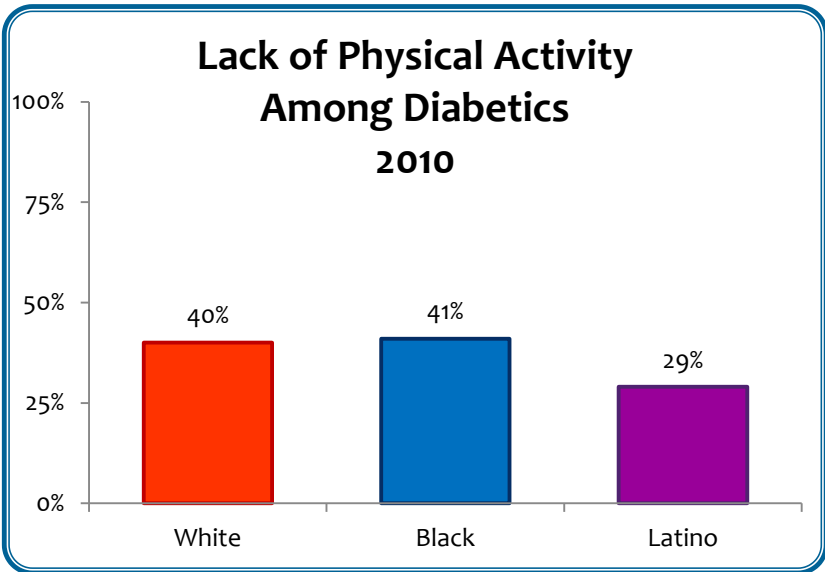
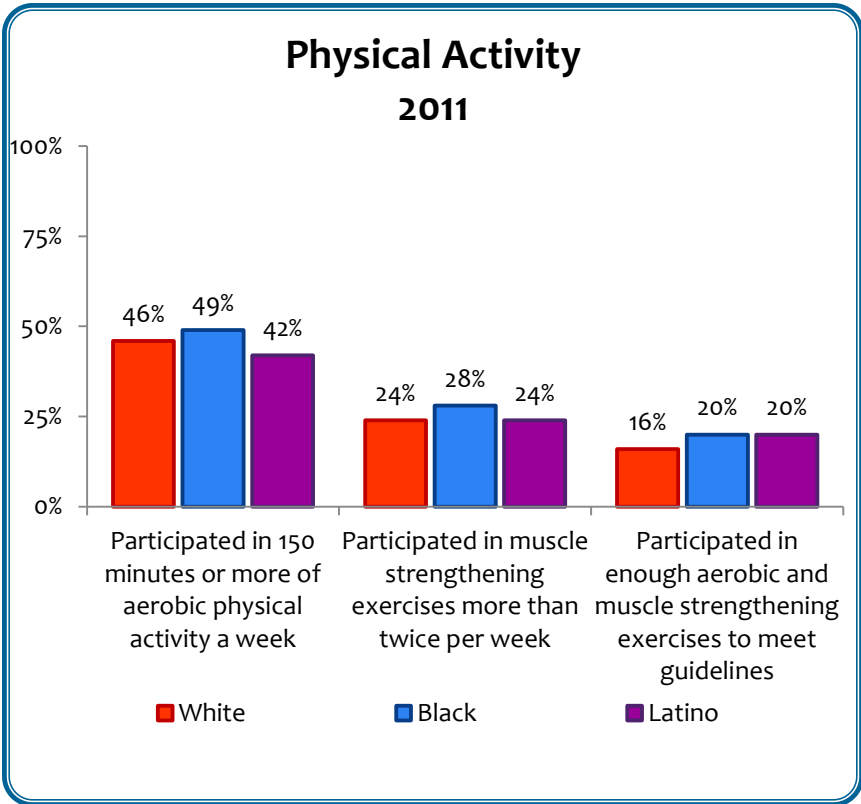
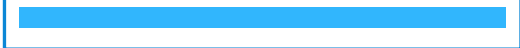
Source: Behavioral Risk Factor Surveillance System⁷



Physical activity is important in prevention of diabetes.⁸

In 2011, a larger proportion of African Americans reported meeting minimum aerobic guidelines and muscle strengthening guidelines than Whites and Latinos. A lower proportion of Whites reported meeting both aerobic and muscle strengthening guidelines compared to African Americans and Latinos.

In 2010, about 2 in 5 White and African American diabetics reported not exercising in the past 30 days. These rates were higher than those reported by Latinos.



Risk Factors - High Cholesterol

Source: Behavioral Risk Factor Surveillance System⁷

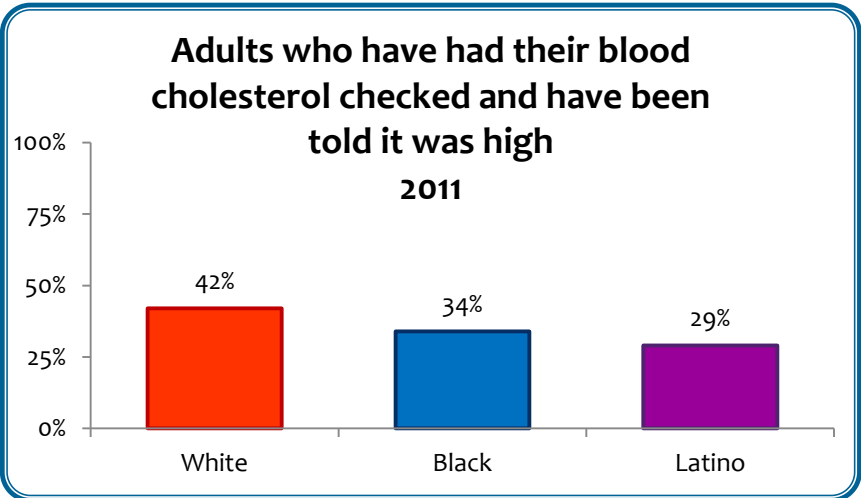
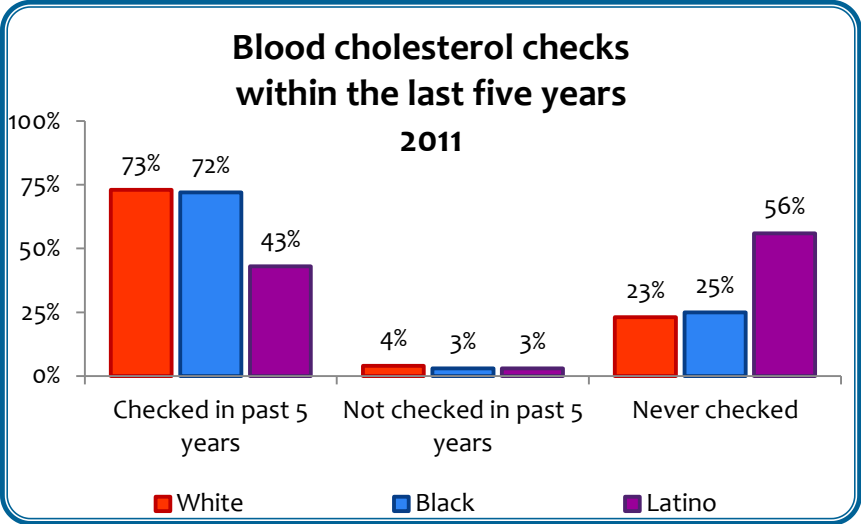
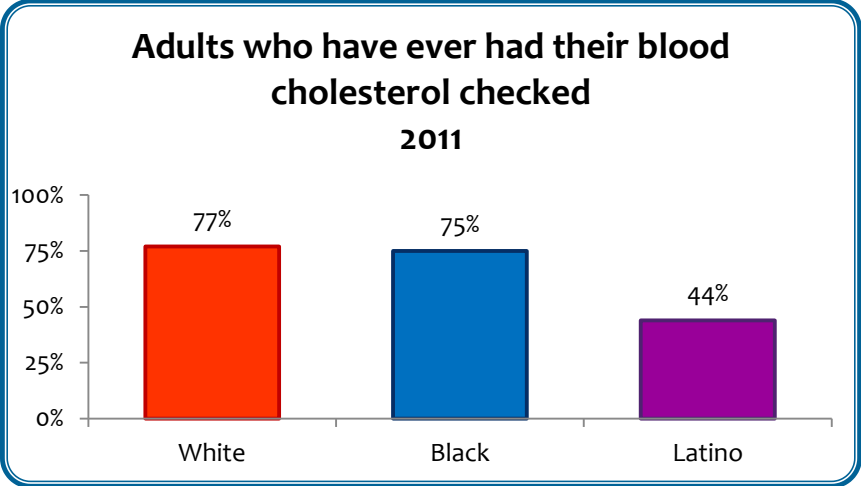
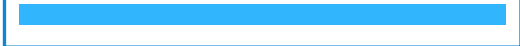


High cholesterol is another risk factor for developing diabetes.⁸

In 2011, similar proportions of Whites and African Americans reported ever having their blood cholesterol checked; both groups showed higher rates of blood cholesterol checks than Latinos.

In 2011, Whites and African Americans also reported the highest levels of blood cholesterol checks within the last five years, with Latinos reporting much lower levels. In addition, a much higher proportion of Latinos reported never having their blood cholesterol checked compared to Whites and African Americans.

In 2011, a higher proportion of Whites had previously had their blood cholesterol level checked and been told it was high compared to African Americans and Latinos.

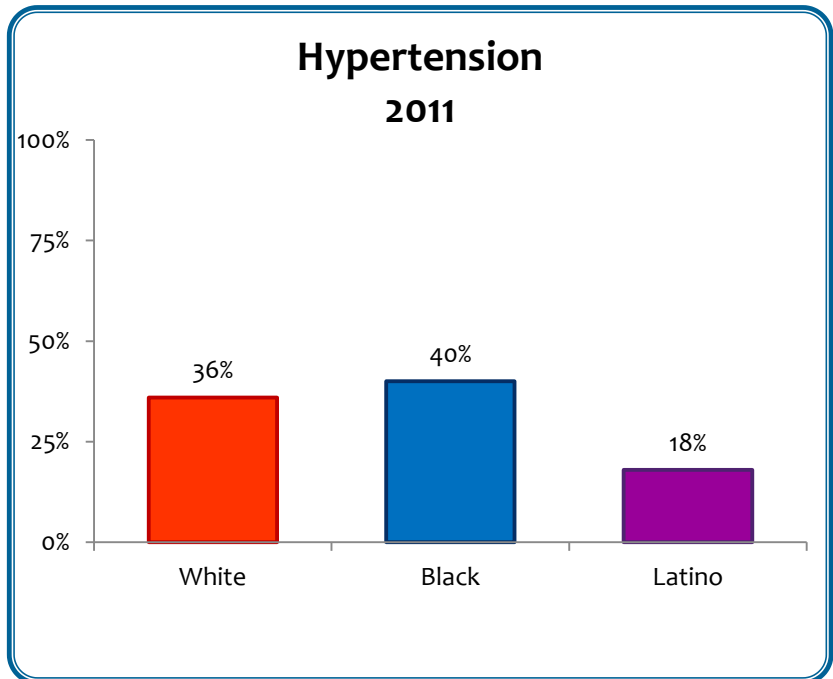


Risk Factors - Hypertension

Source: Behavioral Risk Factor Surveillance System⁷

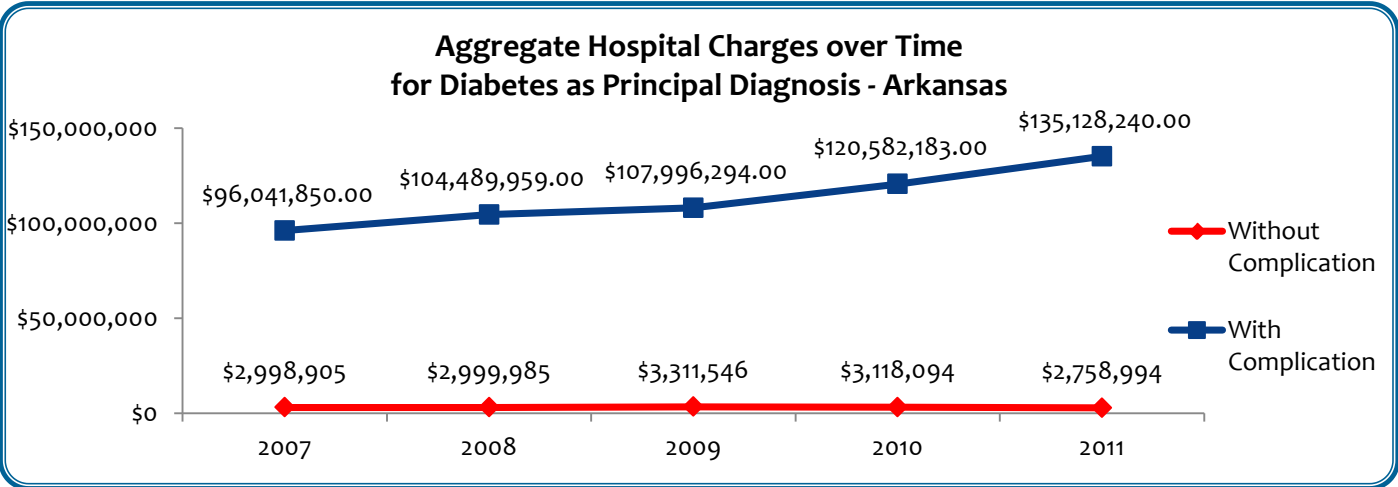
Hypertension is another risk factor associated with an increased risk of developing diabetes.⁸

In 2011, hypertension was most prevalent among African Americans, with rates only marginally higher than those among Whites but significantly higher than those among Latinos.



Financial Burden of Diabetes

Source: Agency for Healthcare Research and Quality, HCUP¹⁰



From 2007 through 2011, the aggregate hospital charges increased substantially for principal diagnoses of diabetes with complications. In 2011, these charges reached \$135 million for Arkansans.

In 2011, there were over 5,900 hospital discharges with a primary diagnosis of diabetes with complications, making it the 16th costliest primary diagnosis in the state. The ranking based on charges was highest for African Americans, for whom diabetes ranked as the 10th most expensive diagnosis and was associated with a rate of 351 discharges per 100,000 people.

Reducing the rate of diabetes-related hospital admissions could result in dramatic cost savings. For example, in 2010, admissions due to long term-complications of diabetes resulted in 110 admissions per 100,000 people; reducing this rate by 50% would have an estimated cost savings of almost \$10 million.

Diabetes and Associated Diagnoses, Characteristics by Race, 2011

	Number of Discharges	Aggregate Charges	Rank of diagnosis by total charges	Rate of discharge (per 100,000)
Diabetes with Complications				
White	4139	\$97,328,238	18 th	190
Black	1583	\$31,435,894	10 th	351
Latino	106	\$2,655,602	20 th	54
Total	5911	\$135,128,240	16 th	201
Acute Kidney Failure				
White	3765	\$88,721,502	21 st	173
Black	891	\$21,889,376	15 th	197
Total	4770	\$114,186,099	19 th	162

Estimated Cost Savings by Diabetes Admission Types, 2010

Admission Type	Rate of admission (per 100,000)	Estimated Cost Savings (if admissions were reduced by:)		
		10%	30%	50%
Uncontrolled Diabetes	25	\$197,100	\$591,200	\$985,400
Diabetes Short-term Complication	73	\$888,200	\$2,664,600	\$4,440,900
Diabetes Long-term Complication	110	\$1,951,500	\$5,854,400	\$9,757,300

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