

# Disparities in **DIABETES MELLITUS** Mortality Among Blacks in Arkansas

Health disparities are gaps in health outcomes or determinants between segments of the population. Many health disparities are related to social determinants of health (*Centers for Disease Control and Prevention, CDC*).

- **Diabetes** is a group of diseases marked by high levels of blood glucose resulting from defects in insulin production, insulin action, or both (*CDC*).
- In 2015, Arkansas ranked 13<sup>th</sup> in the nation for **diabetes** mortality (1<sup>st</sup> being the worst).<sup>1</sup>
- In 2015, a total of 886 Arkansans died due to **diabetes**, of which 20.4% were Black.<sup>1</sup>
- In 2014, total hospitalization costs for **diabetes** in Arkansas was over \$46.7 million. Twenty-one percent of those costs (\$9.9 million) were for Blacks.<sup>2</sup>

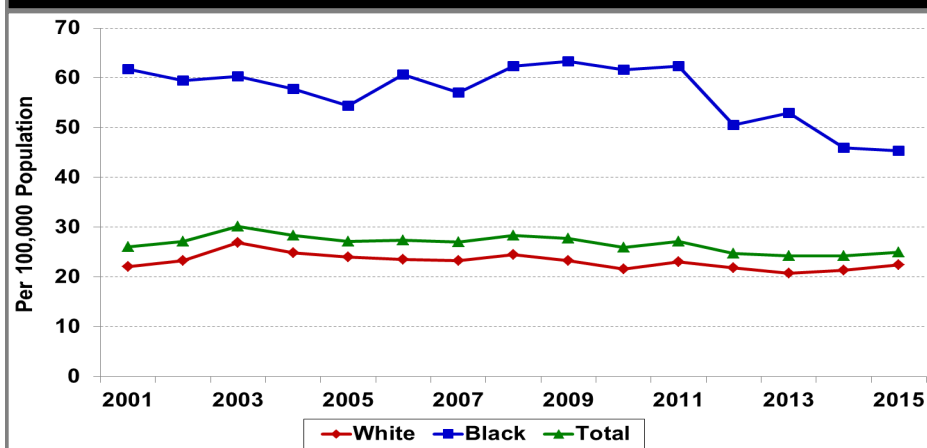
**Table 1: Leading Causes of Death by Black/White Disparity Ratio, Arkansas 2011-2015**

Cause of Death <sup>3</sup>	White Rate <sup>4</sup>	Black Rate <sup>4</sup>	Disparity Ratio <sup>5</sup>	Preventable Deaths among Blacks <sup>6</sup>
1. HIV	1.2	7.0	5.8	27
2. Homicide	4.4	23.5	5.3	89
3. <b>Diabetes</b>	<b>21.9</b>	<b>51.2</b>	<b>2.3</b>	<b>137</b>
4. Perinatal Conditions	3.4	7.6	2.2	20
5. Hypertension	7.3	15.7	2.2	39
6. Kidney Disease	19.0	36.9	1.9	84
7. Septicemia	14.5	23.9	1.6	44
8. Stroke	46.4	61.9	1.3	73
9. Heart Disease	215.2	261.2	1.2	215
10. Cancer	187.9	212.4	1.1	115

Source: Centers for Disease Control and Prevention, National Center for Health Statistics, CDC WONDER Online

- The 15 Leading Causes of deaths among Blacks were sorted and ranked by disparity ratio. The ten causes with the highest disparity ratio are presented.<sup>5</sup>
- **Diabetes** ranked third among the diseases examined.
- **Diabetes** age-adjusted mortality rate for Blacks was 51.2 per 100,000 population compared to 21.9 for Whites, 2.3 times higher than for Whites.<sup>5</sup>
- Preventable Deaths among Blacks showed that 137 Black lives could be saved if the mortality rate for Blacks was equal to the rate for Whites.<sup>6</sup>

**Figure 1: Age-Adjusted Diabetes Mortality Rates by Race Arkansas 2001-2015**

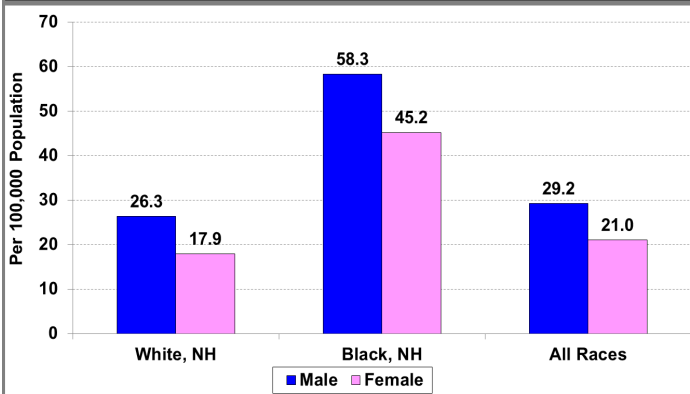


Source: Centers for Disease Control and Prevention, National Center for Health Statistics, CDC WONDER Online

- During the 2001-2015 time period, **diabetes** mortality rates were consistently higher for Blacks as compared to Whites.
- The rate for Whites as well as the state rate remained relatively stable during this time period.
- The burden of **diabetes** has been much greater among minority populations compared to the White population, both in Arkansas and the United States.<sup>1</sup>

<sup>1</sup>CDC Wonder. <sup>2</sup>HCUP State Inpatient Databases 2014. Hospitalization cost includes hospital discharges with principal diagnosis of diabetes. <sup>3</sup>Based on the 15 leading causes of death among Blacks. <sup>4</sup>Age-adjusted mortality rates for Non-Hispanic Whites and Non-Hispanic Blacks. <sup>5</sup>Disparity ratio calculated by dividing the mortality rate for Blacks by the mortality rate for Whites. <sup>6</sup>Number of deaths that could have been prevented among Blacks in the absence of Black-to-White disparity.

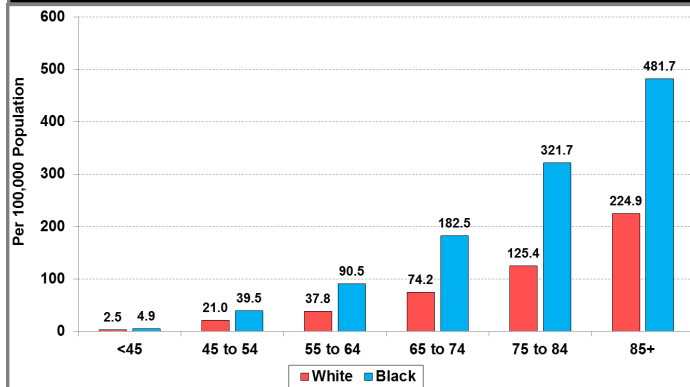
**Figure 2: Age-Adjusted Diabetes Mortality Rates by Gender and Race, Arkansas 2011-2015**



- There were significant differences in **diabetes** mortality rates by race and gender.
- **Diabetes** mortality rates among Black males and females are about two to two and a half times higher compared to White males and females.

NH=Non-Hispanic  
Source: Centers for Disease Control and Prevention, National Center for Health Statistics, CDC WONDER Online Database

**Figure 3: Diabetes Mortality Rates by Age and Race Arkansas 2011-2015**



- **Diabetes** mortality rates increase significantly with age.
- Like many other chronic diseases, **diabetes** can remain undetected for a long time before it is diagnosed.
- **Diabetes** mortality rates are two to two and a half times higher among Blacks within all age categories, compared to Whites.

Source: Centers for Disease Control and Prevention, National Center for Health Statistics, CDC WONDER Online

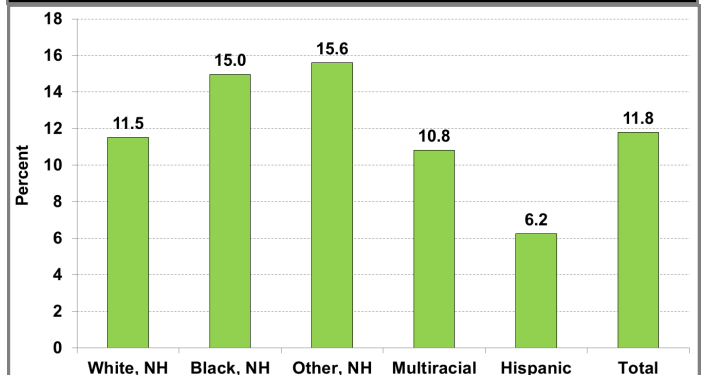
**Table 2: Diabetes Mortality Rates and Disparity Ratios by Race and County, Arkansas 2011-2015**

County	White Rate <sup>7</sup>	Black Rate <sup>7</sup>	Disparity Ratio <sup>8</sup>
1. Ashley	7.9	59.4	7.5
2. Lee	22.2	97.9	4.4
3. Bradley	13.0	55.6	4.3
4. White	19.6	78.4	4.0
5. Lafayette	8.8	33.6	3.8
6. Dallas	22.2	72.7	3.3
7. Jackson	20.9	62.7	3.0
8. Faulkner	13.6	39.7	2.9
9. Conway	22.3	63.9	2.9
10. Pulaski	12.9	36.3	2.8

- **Diabetes** mortality rates were sorted and ranked by disparity ratio. Only those counties with at least five total deaths and at least four total Black deaths were used in the analysis. The ten counties with the highest disparity ratio among Blacks were highlighted.
- Ashley County had the highest disparity ratio of 7.5 in **diabetes** mortality for the 2011-2015 time period.
- Between 2011-2015, 8 counties had less than 10 **diabetes** related deaths and 12 counties had less than 20 **diabetes** related deaths.

Source: Arkansas Health Statistics Branch Query System

**Figure 4: Estimated Diabetes Prevalence<sup>9</sup> by Race and Ethnicity, Arkansas 2011-2015**



- During the 2011-2015, with the exception of Other races, **diabetes** prevalence among Blacks was higher than all other racial-ethnic groups.
- **Diabetes** continues to be an area of public health concern regardless of race or ethnicity.

NH=Non-Hispanic  
Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System

<sup>7</sup>Age-adjusted mortality rates for Non-Hispanic Whites and Non-Hispanic Blacks. <sup>8</sup>Disparity ratio calculated by dividing the mortality rate for Blacks by the mortality rate for Whites. <sup>9</sup>Diabetes prevalence refers to the percentage of adults reporting a healthcare professional has told them they have diabetes.