

# Disparities in Nephritis/Nephrosis (KIDNEY DISEASE) 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*).

- Nephritis/Nephrosis, **Kidney Disease**, occurs when the kidneys become damaged and lose their ability to filter the blood. (*CDC*).
- In 2015, Arkansas ranked 5<sup>th</sup> in the nation for **kidney disease** mortality (1<sup>st</sup> being the worst).<sup>1</sup>
- In 2015, a total of 707 Arkansans died due to **kidney disease**, of which 15.6% were Black.
- In 2014, total hospitalization costs for **kidney disease** in Arkansas was over \$1.0 million. Twenty-one percent of those costs (\$211 thousand) were for Blacks.<sup>2</sup>

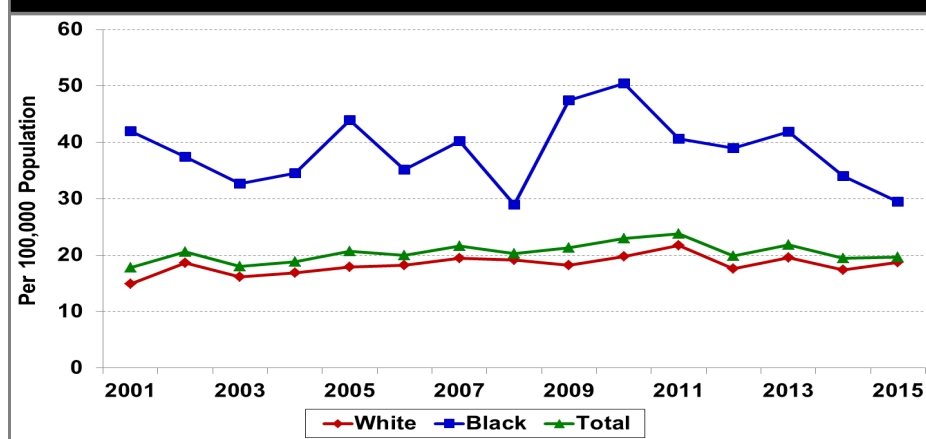
**Table 1: Leading Causes of Death by Black/White Disparity Ratio, Arkansas 2011-2015**

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. Diabetes	21.9	51.2	2.3	137
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 were presented.<sup>5</sup>
- **Kidney disease** ranked sixth among the diseases examined.
- The **kidney disease** age-adjusted mortality rate for Blacks was 36.9 per 100,000 population compared to 19.0 for Whites, 1.9 times higher than for Whites.<sup>5</sup>
- Preventable Deaths among Blacks showed that 84 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 Kidney Disease Mortality Rates by Race Arkansas 2001-2015**

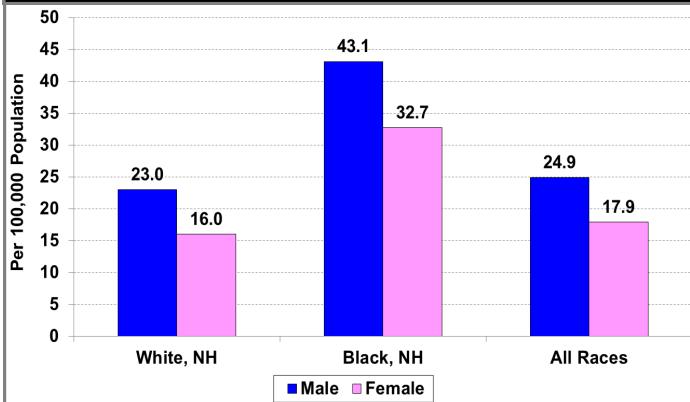


Source: Centers for Disease Control and Prevention, National Center for Health Statistics, CDC WONDER Online

- During the 2001-2015 time period, **kidney disease** mortality rates among Blacks remained consistently higher than the rates among Whites.
- Overtime, the rates for Blacks dropped while the rates for Whites and the State remained relatively flat.
- The gap between Black and White mortality rates narrowed as **kidney disease** mortality rates among Blacks declined, especially in the recent years.

<sup>1</sup>CDC Wonder. <sup>2</sup>HCUP State Inpatient Databases 2014. Hospitalization cost includes hospital discharges with principal diagnosis of nephritis, nephrosis, renal sclerosis. <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.

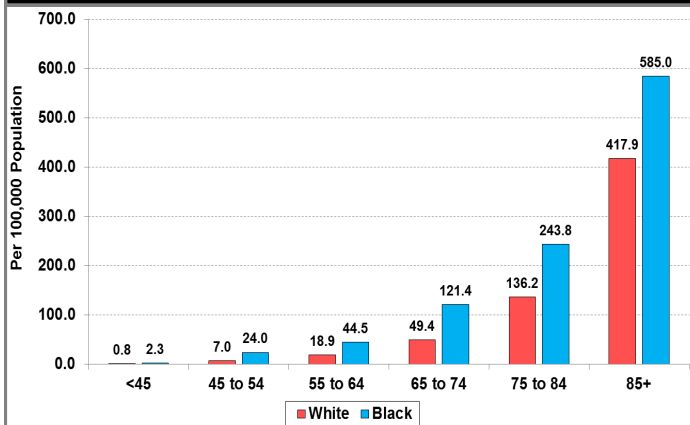
**Figure 2: Age-Adjusted Kidney Disease Mortality Rates by Gender and Race, Arkansas 2011-2015**



- The **kidney disease** mortality rates among Black males and females were about two times higher compared to White males and females.
- Regardless of race, males had much higher mortality rates than females.

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

**Figure 3: Kidney Disease Mortality Rates by Age and Race, Arkansas 2011-2015**



- **Kidney disease** mortality rates among Blacks were higher in all age categories. Rates were about one and a half times to three and a half times higher than their White counterparts.
- Blacks were more likely to develop **kidney disease** due to high rate of diabetes, high blood pressure and heart disease.

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

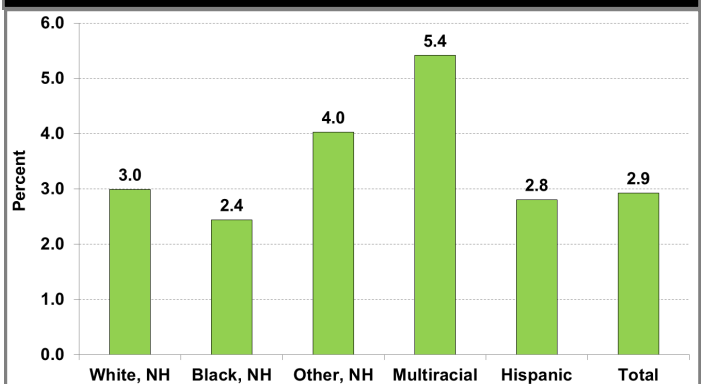
**Table 2: Kidney Disease Mortality Rates and Disparity Ratios by Race and County, Arkansas 2011-2015**

County	White Rate <sup>7</sup>	Black Rate <sup>7</sup>	Disparity Ratio <sup>8</sup>
1. Lee	5.6	39.1	7.0
2. Bradley	9.7	55.5	5.7
3. Independence	25.6	128.9	5.0
4. Cross	12.2	51.2	4.2
5. Lonoke	18.9	71.8	3.8
6. Nevada	8.7	32.0	3.7
7. Hempstead	8.9	28.8	3.2
8. White	16.1	50.3	3.1
9. Sebastian	18.8	58.0	3.1
10. Woodruff	18.2	51.1	2.8

- **Kidney disease** 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. Ten counties with highest disparity ratio among Blacks were highlighted.
- Lee County had the highest disparity ratio of 7.0 in **kidney disease** mortality for the 2011-2015 time period.
- Between 2011-2015, 2 counties had less than 10 **kidney disease** related deaths and another 20 counties had less than 20 **kidney disease** deaths.

Source: Arkansas Health Statistics Branch Query System

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



- The **kidney disease** prevalence rates varied by race/ethnicity. Prevalence was highest among Multiracial (5.4%) and lowest among Blacks (2.4%).
- Diabetes and high blood pressure were the most common causes of kidney failure.

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>Kidney disease prevalence refers to the percentage of adults reporting a healthcare professional has told them they have kidney disease.