

# Disparities in **SEPTICEMIA** 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*).

- **Septicemia** or sepsis, are serious bloodstream infections that can rapidly become life-threatening. It may arise from various infections, including those of the skin, lungs, abdomen, and urinary tract (CDC).
- In 2015, Arkansas tied with Indiana for 8<sup>th</sup> in the nation for **septicemia** mortality (1<sup>st</sup> being the worst).<sup>1</sup>
- In 2015, a total of 525 Arkansans died due to **septicemia**, of which 16.6% were Black.
- In 2014, total hospitalization costs for **septicemia** in Arkansas was over \$191.2 million. Thirteen percent of those costs (\$24.2 million) were for Blacks.<sup>2</sup>

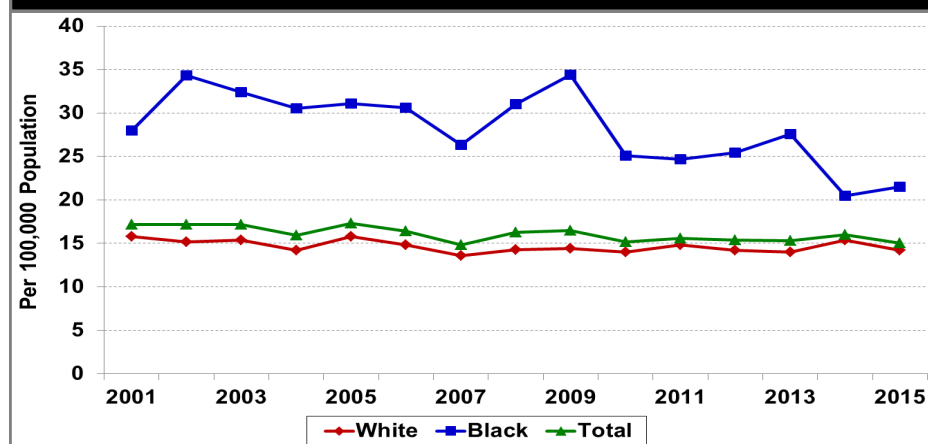
**Table 1: Leading Causes of Death by Black/White Disparity Ratio, Arkansas 2011-2015**

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. 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. <b>Septicemia</b>	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>
- **Septicemia** ranked seventh among the diseases examined.
- The **septicemia** age-adjusted mortality rate for Blacks was 23.9 per 100,000 population compared to 14.5 for Whites, 1.6 times higher than for Whites.<sup>5</sup>
- Preventable Deaths among Blacks showed that 44 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 Septicemia Mortality Rates by Race Arkansas 2001-2015**

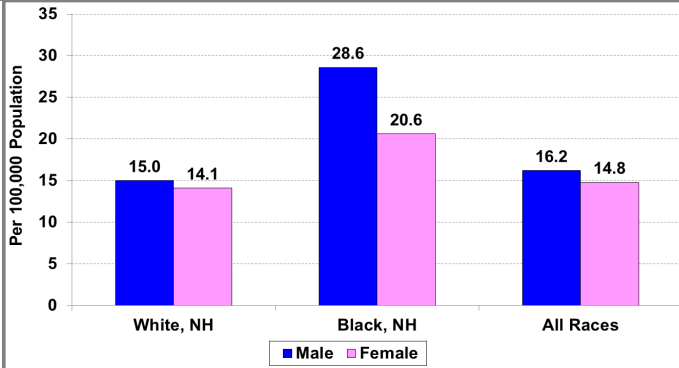


Source: Centers for Disease Control and Prevention, National Center for Health Statistics, CDC WONDER Online

- During the 2001-2015 time period, **septicemia** mortality rates for Blacks remained higher than the rates for Whites and the State.
- Overtime, the mortality rate for Blacks declined while the rates for Whites and the State remained relatively flat.
- The gap between Black and White rates narrowed due to more rapid decline in Black **septicemia** rates.

<sup>1</sup>CDC Wonder. <sup>2</sup>HCUP State Inpatient Databases 2014. Hospitalization cost includes hospital discharges with principal diagnosis of Septicemia. <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 Septicemia Mortality Rates by Gender and Race, Arkansas 2011-2015**



- The **septicemia** mortality rates among Black males and females were about one and half to two times higher compared to White males and females.
- Regardless of race, **septicemia** mortality rates were higher among males.

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

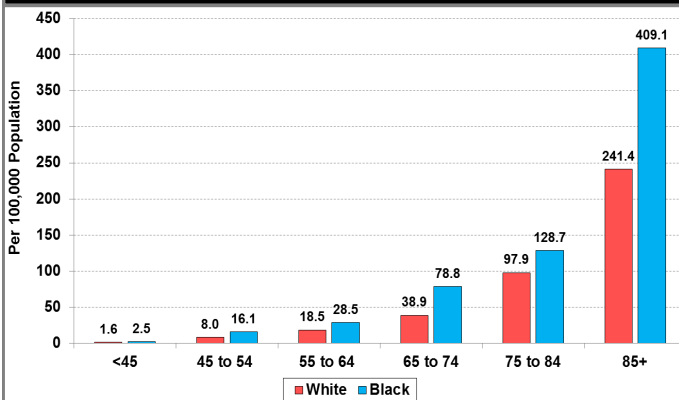
**Table 2: Septicemia Mortality Rates and Disparity Ratios by Race and County, Arkansas 2011-2015**

County	White Rate <sup>7</sup>	Black Rate <sup>7</sup>	Disparity Ratio <sup>8</sup>
1. Dallas	9.3	32.8	3.5
2. Chicot	8.2	24.4	3.0
3. Phillips	13.1	29.1	2.2
4. Monroe	11.8	26.2	2.2
5. Crittenden	11.0	22.9	2.1
6. Lonoke	18.4	31.9	1.7
7. Desha	13.1	22.6	1.7
8. Columbia	19.0	31.2	1.6
9. Jefferson	21.7	34.8	1.6
10. Ashley	13.2	20.6	1.6

- **Septicemia** 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.
- Dallas County had the highest disparity ratio of 3.5 in **septicemia** mortality for the 2010-2015 time period.
- Between 2011-2015, 9 counties had less than 10 deaths due to **septicemia** and another 27 counties had less than 20 **septicemia** deaths.

Source: Arkansas Health Statistics Branch Query System

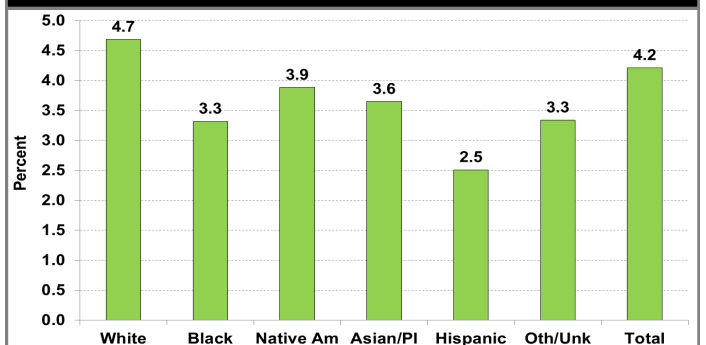
**Figure 3: Septicemia Mortality Rates by Age and Race, Arkansas 2011-2015**



- The **septicemia** mortality rates among Blacks was higher in all age categories.
- **Septicemia** mortality rates were significantly higher among older age groups, particularly among those 85 years and over.

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

**Figure 4: Septicemia In-Hospital Incidence<sup>9</sup> by Race/Ethnicity, Arkansas 2011-2015**



- The **septicemia** in-hospital incidence rates were higher among Whites and lowest among Hispanics.
- **Septicemia** is a significant public health and clinical management challenge. Routine healthcare services are needed to reduce the risk of infections that lead to **septicemia**.

NH=Non-Hispanic  
Source: Arkansas Department of Health, Health Statistics Branch, Hospital Discharge Data 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>In-hospital incidence is defined as the total number of Septicemia discharges per 100 discharges.