



Minority Health Profile Mortality of Male Ohioans by Race and Ethnicity

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Data Bulletin

Please Note: Mortality statistics nationwide may significantly underestimate the mortality of minorities, particularly Hispanics, Asian American/Pacific Islanders and Native American/Alaska Natives.

KEY FINDINGS

- In 2002, black males in Ohio had a significantly higher age-adjusted* mortality rate compared to white, Asian/Pacific Islander, Hispanic and American Indian/Alaska Native males. Black males had significantly higher age-adjusted mortality rates than whites for heart disease, cancer, stroke, diabetes, nephritis, nephritic syndrome and nephrosis (kidney disease), homicide, perinatal conditions and septicemia. When examining trends from 1994-2002, black males had age-adjusted mortality rates that increased for diabetes and kidney diseases. In contrast, from 1994-2002 the age-adjusted mortality rates for black males decreased for heart disease, cancer, stroke, suicide and homicide.
- Hispanic males had a significantly lower age-adjusted mortality rate than white males in 2002. They also had a significantly lower mortality rate for heart disease and cancer than white males in 2002. Trend data from 1994-2002 for Hispanic males indicated age-adjusted mortality rates had increased for accidents/unintentional injuries, suicide and diabetes and decreased for heart disease, chronic lower respiratory disease and homicide.
- Asian/Pacific Islander males* in Ohio had a significantly lower mortality rate in 2002 compared to white males. The 2002 age-adjusted mortality rates for Asians/Pacific Islanders were significantly lower than whites for heart disease and cancer. Trend data from 1994-2002 for Asian/Pacific Islander males indicated an age-adjusted mortality rate that increased for accidents/unintentional injuries and decreased for heart disease.
- In 2002, American Indian/Alaska Native** males in Ohio had a significantly lower age-adjusted mortality rate than white males. When examined for three-year time periods, American Indian/Alaska Native males had a significantly lower age-adjusted mortality rate of heart disease than white males.

* Age adjustment is the process by which differences in the age composition of two or more populations are controlled. This type of measure eliminates differences that can occur because one population is older than another.

** Mortality rates for Asian/Pacific Islander and American Indian/Alaska Native males were analyzed to a very limited degree due to insufficient numbers to calculate stable rates.

Ten Leading Causes of Death

Ten Leading Causes of Death by Race and Ethnicity, Males, Ohio, 2002

Cause of Death	All Races (Rank)	White (Rank)	Black (Rank)	American Indian/Alaska Native (Rank)*	Asian/Pacific Islander (Rank)*	Hispanic** (Rank)*
Diseases of the Heart	14,852 (1)	13,301 (1)	1,506 (1)	8 (1)	37 (2)	84 (1)
Malignant Neoplasms (Cancer)	12,763 (2)	11,317 (2)	1,400 (2)	4 (3)	42 (1)	76 (2)
Chronic Lower Respiratory Diseases	2,880 (3)	2,655 (3)	222 (7)	---	3 (10****)	16 (5)
Cerebrovascular Disease (Stroke)	2,764 (4)	2,404 (4)	346 (3)	5 (2)	9 (4)	22 (4)
Accidents (Unintentional Injuries)	2,476 (5)	2,191 (5)	271 (4)	---	14 (3)	50 (3)
Diabetes	1,744 (6)	1,487 (6)	252 (5)	---	5 (6)	16 (6)
Influenza/Pneumonia	1,052 (7)	962 (8)	---	1 (5***)	3 (10****)	---
Suicide	1,015 (8)	939 (7)	---	---	6 (5)	15 (7)
Nephritis, Nephrotic Syndrome & Nephrosis	953 (9)	774 (9)	177 (8)	---	---	---
Alzheimer's Disease	741 (10)	688 (10)	---	---	---	---
Homicide	---	---	234 (6)	---	4 (8)	---
Perinatal Conditions	---	---	141 (9)	2 (4)	4 (9)	14 (8)
Septicemia (Blood Poisoning)	---	---	105 (10)	---	---	---
Congenital Malformations	---	---	---	---	5 (7)	---
Chronic Liver Disease and Cirrhosis	---	---	---	1 (6***)	3 (10****)	11 (9)
HIV Disease	---	---	---	---	---	9 (10)
All Other Causes	10,984	9,297	1,359	4	31	97
All Causes	52,224	46,015	6,013	27	169	410

* When number of death occurrences within a race were equal, rankings for leading cause of death were determined by assigning a higher ranking number to the death cause that was higher for 10 leading causes of death for all races.

** Hispanics may be of any race.

*** There was also one death each due to Aortic Aneurysm and Nutritional Deficiencies.

****There were also three deaths each due to Hypertension.

Source: Ohio Department of Health, 2002 Death Certificates.

- Heart disease and cancer accounted for 48.3 percent of total deaths for black males and 52.9 percent of total deaths for white males.
- Black males were more likely to have deaths from homicide, perinatal conditions and septicemia compared to white males.
- Cancer was the leading cause of death for male Asian/Pacific Islanders in Ohio, followed by heart disease.
- Hispanic males had the largest percentage of deaths (12.2 percent of total deaths) due to accidents/unintentional injuries compared to other racial groups.
- Heart disease, cancer and stroke accounted for 63 percent of total deaths for American Indian/Alaska Native males.

Age-Adjusted Death Rates* for Ten Leading Causes of Death by Race and Ethnicity, Males, Ohio, 2002

Cause of Death	All Races (Rank)	White (Rank)	Black (Rank)	American Indian/Alaska Native (Rank)	Asian/Pacific Islander (Rank)	Hispanic** (Rank)
Diseases of the Heart	315.2 (1)	311.1 (1)	370.9 (1)	***	126.7 (2)	208.0 (1)
Malignant Neoplasms (Cancer)	256.2 (2)	250.2 (2)	339.3 (2)	***	103.1 (1)	174.4 (2)
Chronic Lower Respiratory Diseases	61.2 (3)	61.7 (3)	58.2 (7)	---	***	***
Cerebrovascular Disorders (Stroke)	61.0 (4)	58.4 (4)	90.4 (3)	***	***	57.3 (4)
Accidents (Unintentional Injuries)	47.1 (5)	47.5 (5)	48.4 (4)	---	***	46.4 (3)
Diabetes	35.8 (6)	33.6 (6)	62.1 (5)	---	***	***
Influenza/Pneumonia	24.1 (7)	24.2 (7)	---	***	***	---
Suicide	18.8 (8)	19.7 (8)	---	---	***	***
Nephritis, Nephrotic Syndrome & Nephrosis	20.7 (9)	18.7 (9)	45.3 (8)	---	---	---
Alzheimer's Disease	17.6 (10)	17.7 (10)	---	---	---	---
Homicide	---	3.1	35.3 (6)	---	***	---
Perinatal Conditions	---	4.0	14.6 (9)	***	***	***
Septicemia (Blood Poisoning)	---	13.3	27.2 (10)	---	---	---
Congenital Malformations	---	---	---	---	***	---
Chronic Liver Disease and Cirrhosis	---	---	---	***	***	***
HIV Disease	---	---	---	---	---	***
All Other Causes	227.4	215.0	311.0	---	98.4	185.2
All Causes	1085.1	1057.9	1402.7	284.2	478.7	811.8

Highlighted rates are significantly different when compared to the white rate (p<.05)

* Age-adjusted rates are the number of deaths per 100,000 population in specified race and ethnic group.

** Hispanics may be of any race.

*** Rates based on fewer than 20 cases are not presented (figures considered unreliable due to small numbers).

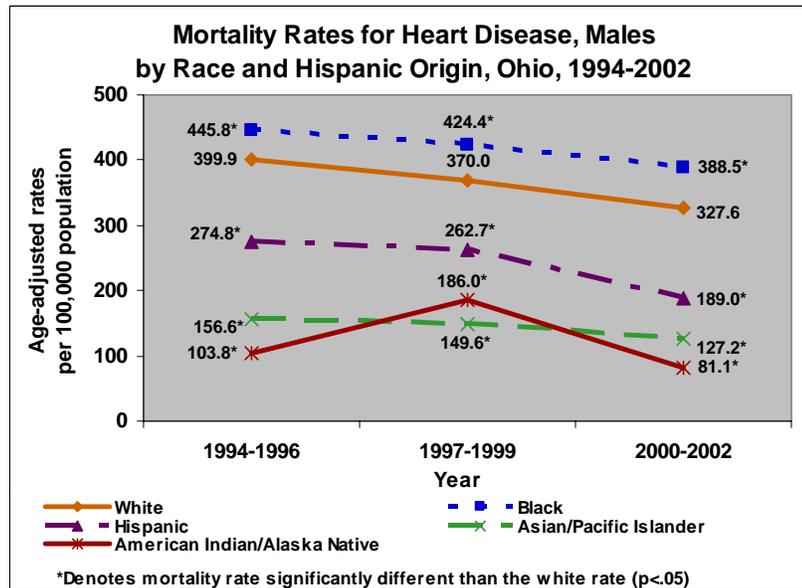
Sources: Ohio Department of Health, 2002 Death Certificates, National Center for Health Statistics. Estimates of the July 1, 2000-July 1, 2002, United States resident population from the Vintage 2002 postcensal series by year, county, age, sex, race and Hispanic origin, prepared under a collaborative arrangement with the U.S. Census Bureau. 2003.

- Age-adjusted 2002 mortality rates for black males were significantly higher than white males for five of the 10 leading causes of death categories for all races. The causes include heart disease, malignant neoplasms (cancer), stroke, diabetes and nephritis, nephrotic syndrome and nephrosis (kidney disease).
- Black males had significantly higher age-adjusted mortality rates than white males for homicide, perinatal conditions and septicemia.
- Asian/Pacific Islanders and Hispanic males had significantly lower age-adjusted mortality rates than white males for heart disease and cancer.

Heart Disease

Although the age-adjusted mortality rate for heart disease was significantly higher for black than white males in each of the three time periods examined, the rate declined from 1994-2002 for both whites (18.1 percent) and blacks (12.9 percent).

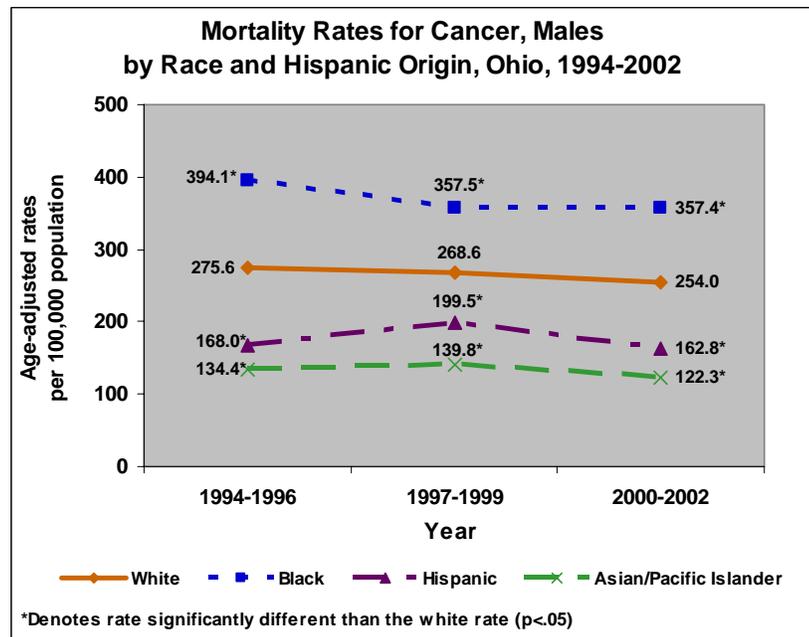
- During the 2000-2002 time period, mortality rates for heart disease were highest for black males, followed by white, Hispanic, Asian/Pacific Islander and American Indian/Alaska Native males.
- Hispanic, Asian Pacific Islanders and American Indian/Alaska Native males all had age-adjusted mortality rates for heart disease that were significantly lower than white males in each time period examined.



Cancer

Black male Ohioans had significantly higher age-adjusted mortality rates from cancer than all other racial and ethnic groups in each three-year time period examined.

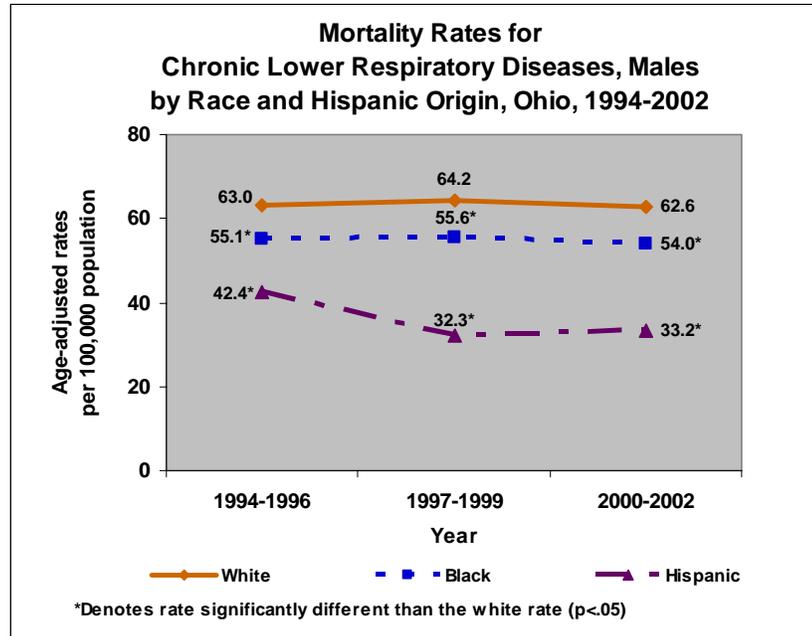
- White (7.8 percent), black (9.3 percent), Hispanic (3.1 percent) and Asian/Pacific Islanders (9 percent) all had declines in age-adjusted mortality rates due to cancer from the 1994-1996 to the 2000-2002 time period.
- Hispanic and Asian/Pacific Islander males had age-adjusted mortality rates from cancer that were significantly lower than white males for each time period examined.



Chronic Lower Respiratory Diseases

White male Ohioans had significantly higher age-adjusted mortality rates for chronic lower respiratory diseases than black and Hispanic males.

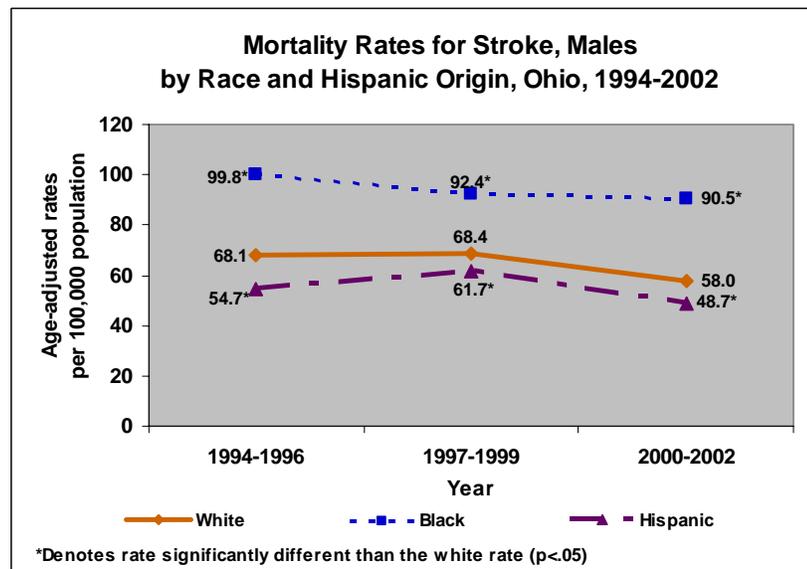
- The age-adjusted death rate from chronic lower respiratory disease declined by 21.7 percent for Hispanic males from the 1994-1996 to the 2000-2002 time period. The rate of decline for white males (0.6 percent) and black males (2 percent) was much smaller for the same time period.
- Hispanic males had an age-adjusted death rate for chronic lower respiratory diseases that was nearly half the rate for white males in the 2000-2002 time period.



Stroke

The age-adjusted death rate from stroke was consistently higher for black male Ohioans compared to white and Hispanic males.

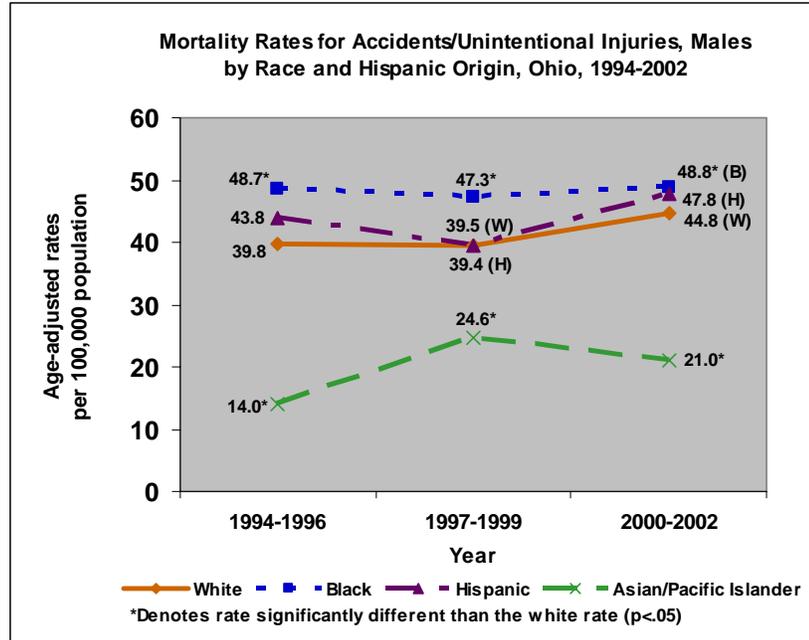
- Hispanic males had an age-adjusted death rate for stroke that was significantly lower than white males for the three time periods examined.
- During the 2000-2002 time period black males had a rate of stroke that was 56 percent higher than white males and 85.8 percent higher than Hispanic males.



Accidents (Unintentional Injuries)

Age-adjusted death rates among black males due to accidents or unintentional injuries were significantly higher than white males from the 1994-1996 through the 2000-2002 time periods.

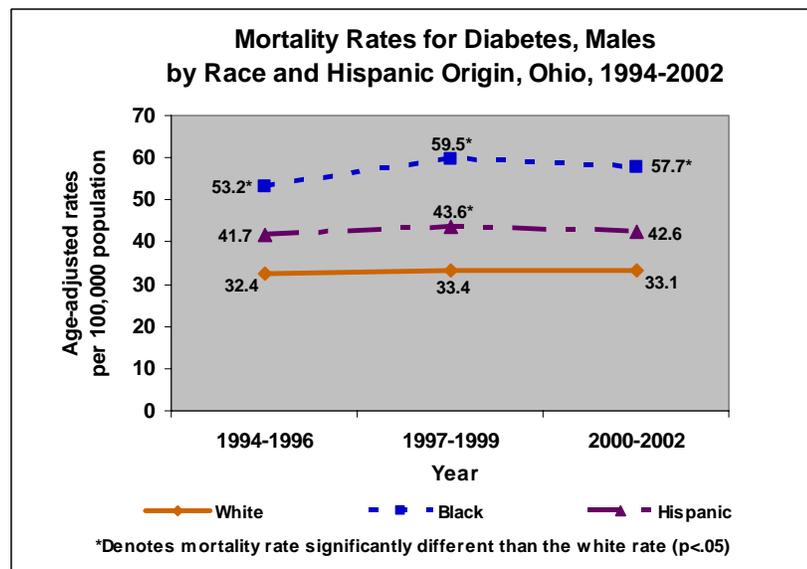
- Asian/Pacific Islanders were significantly less likely than any of the other racial or ethnic groups to die as the result of an accident or unintentional injury.
- Each racial/ethnic group had increases in the death rate from accidents or unintentional injury from the 1994-1996 to the 2000-2002 time period. Asian/Pacific Islanders males had the greatest increase (50 percent) followed by white (12.6 percent), Hispanic (9.1 percent) and black (0.2 percent) males.



Diabetes

The age-adjusted death rate for diabetes among black males was significantly higher than white males and increased between the 1994-1996 and the 2000-2002 time periods (8.5 percent).

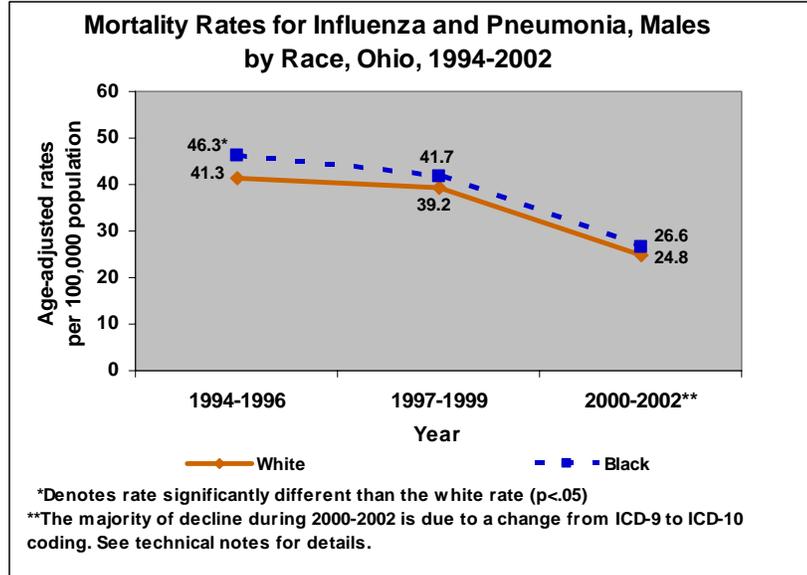
- The age-adjusted diabetes death rate among Hispanic males was significantly higher than white males during the 1997-1999 time period.
- Both Hispanic and white males had a 2.2 percent increase in the death rate from diabetes between the 1994-1996 and the 2000-2002 time period.



Influenza/Pneumonia

During the 1994-1996 time period, black male Ohioans were significantly more likely to die from influenza and pneumonia compared to white males.

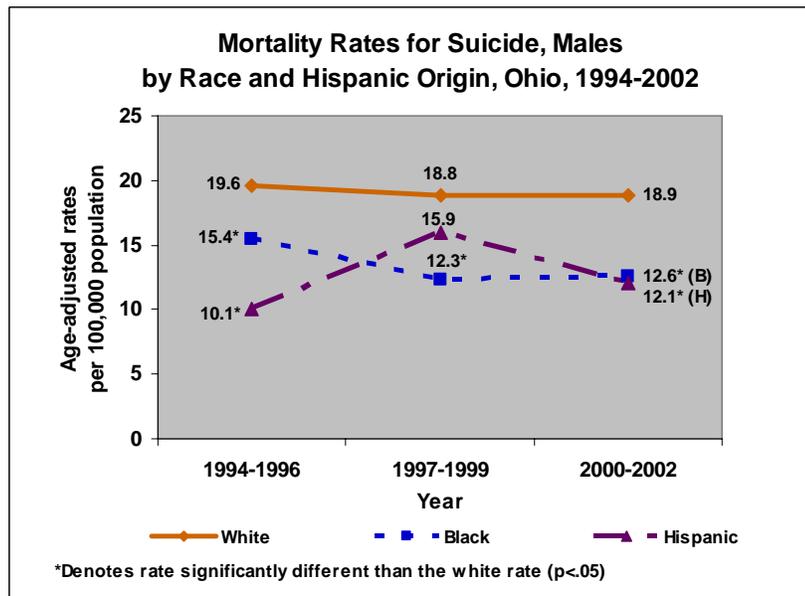
- There were no significant differences in death rates due to influenza and pneumonia between black and white males during the 1997-1999 and the 2000-2002 time periods.
- Although death rates appear to decline considerably for both white and black males during the 2000-2002 time period, much of the decline can be attributed to changes that occurred in 1999 due to a shift from ICD-9 to ICD-10 coding. See technical notes for additional details.



Suicide

Age-adjusted death rates from suicide were significantly higher for white males Ohioans compared to black males from the 1994-1996 to the 2000-2002 time periods.

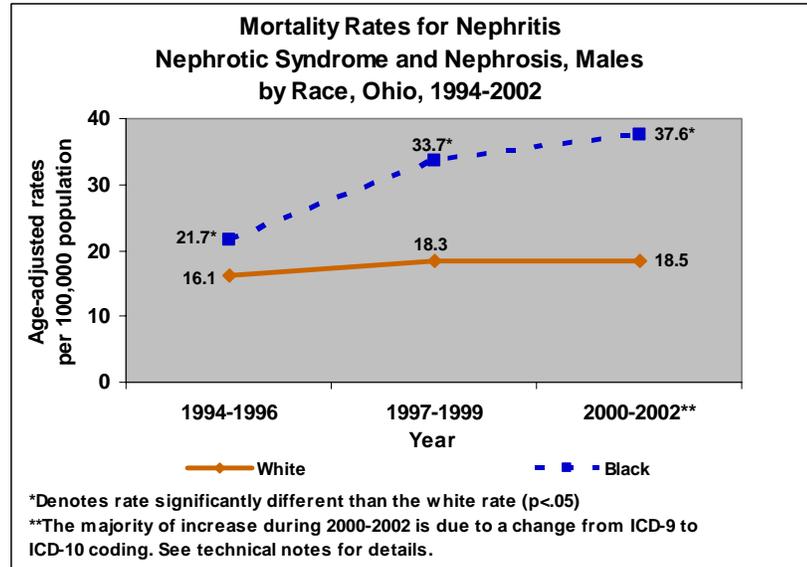
- Hispanic males had a rate of suicide significantly lower than whites for the 1994-1996 and the 2000-2002 time period.
- During the 2000-2002 time period white males had a rate of suicide that was 50 percent higher than black males and 56.2 percent higher than Hispanic males.



Nephritis, Nephrotic Syndrome and Nephrosis (Kidney Disease)

The age-adjusted death rate due to kidney disease was twice as high for black male Ohioans when compared to white males in the 2000-2002 time period.

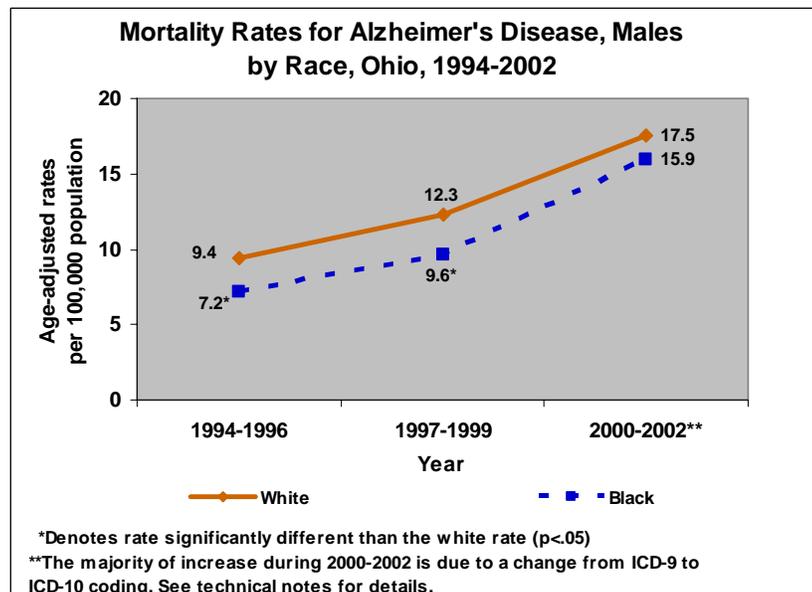
- The age-adjusted death rate from kidney disease increased by 73.3 percent for black males from the 1994-1996 to the 2000-2002 time period. The rate of increase for white males was 14.9 percent for the same time period.
- Although death rates appear to increase considerably for black males during the 2000-2002 time period, much of the increase can be attributed to changes that occurred in 1999 due to a shift from the ICD-9 to the ICD-10 coding system. See technical notes for additional details.



Alzheimer's Disease

The age-adjusted death rate due to Alzheimer's disease was significantly higher for white male Ohioans when compared to black males during the 1994-1996 and 1997-1999 time periods.

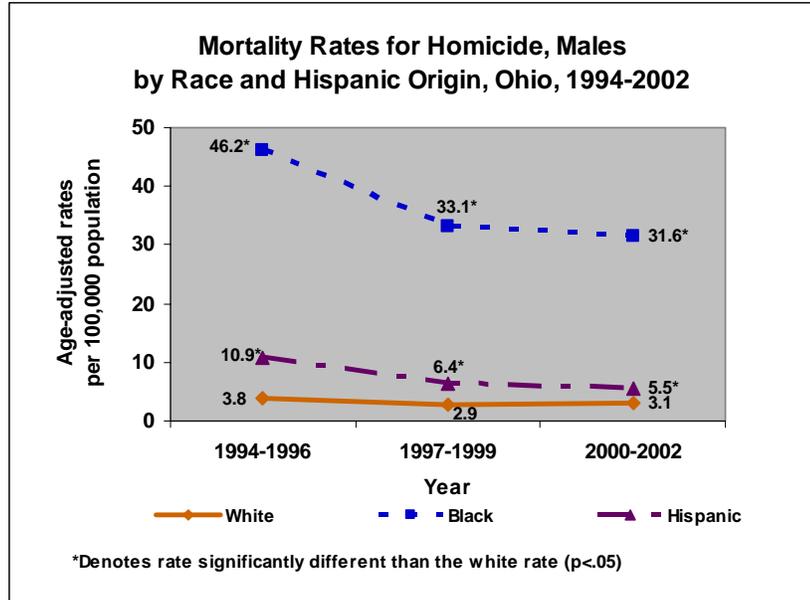
- There were no significant differences in death rates due to Alzheimer's disease between black and white males during the 2000-2002 time period.
- Although death rates appear to increase considerably for both white and black males during the 2000-2002 time period, much of the increase can be attributed to changes that occurred in 1999 due to a shift from ICD-9 to ICD-10 coding. See technical notes for additional details.



Homicide

Black male Ohioans had an age-adjusted death rate from homicide during the 2000-2002 time period that was more than 10 times the rate for white males and more than five times the rate for Hispanic males.

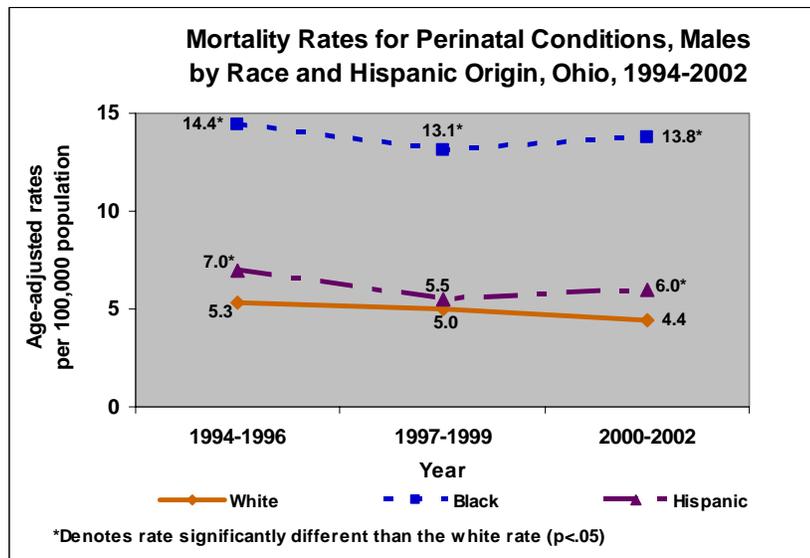
- Hispanic males (49.5 percent) and black males (31.6 percent) experienced considerable drops in age-adjusted death rates from homicide between the 1994-1996 and the 2000-2002 time periods, while the rate for white males declined 18.4 percent.
- Black and Hispanic males had significantly higher age-adjusted mortality rates for homicide than white males for each time period examined.



Perinatal Conditions

Black male Ohioans had an age-adjusted death rate due to perinatal conditions during the 2000-2002 time period that was more than three times the rate for white males and more than two times the rate for Hispanic males.

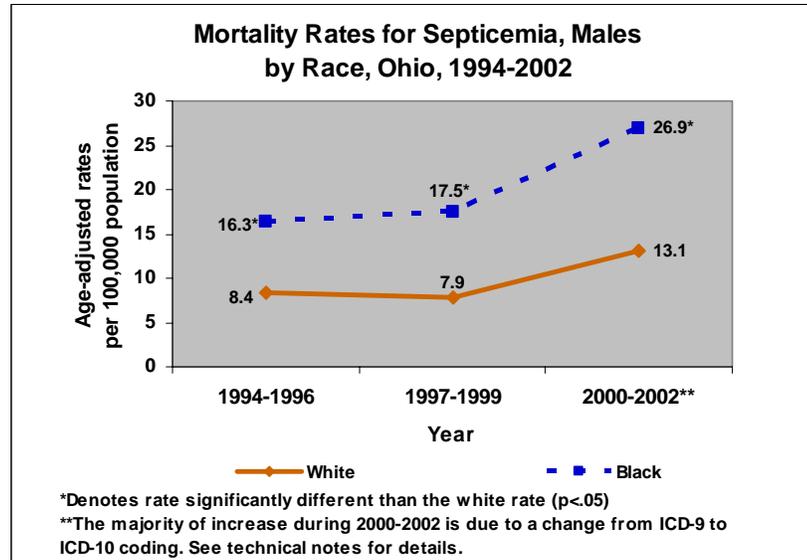
- Hispanic males (14.3 percent), white males (17 percent) and black males (4.3 percent) all experienced drops in age-adjusted death rates from perinatal conditions between the 1994-1996 and the 2000-2002 time periods.
- Black males had significantly higher age-adjusted mortality rates for perinatal conditions than white males for each time period while Hispanic males had rates significantly higher than white males during the 1994-1996 and the 2000-2002 time periods.



Septicemia (Blood Poisoning)

Age-adjusted death rates from septicemia were significantly higher for black male Ohioans compared to white males from the 1994-1996 to the 2000-2002 time periods.

- During each time period examined, black males were twice as likely as white males to die from septicemia.
- Although death rates appear to increase considerably for both white and black males during the 2000-2002 time period, much of the increase can be attributed to changes that occurred in 1999 due to a shift from ICD-9 to ICD-10 coding. See technical notes for additional details.



NOTES

For this data bulletin, we have chosen to focus on the 10 leading causes of death for males in Ohio. All comparisons between mortality rates for different racial and ethnic groups were made relative to the white rate. Lack of reported disparity in mortality does not imply that the mortality rate of any racial or ethnic Ohio group is good relative to national or other standards. In cases where the racial/ethnic population is particularly small in the state (i.e., American Indian/Alaska Native), the racial/ethnic group may not be representative of that group nationwide. The data presented in this bulletin did not test for significance between minority groups or examine areas that are not among the 10 leading causes of death, but may indeed show significant differences between racial groups (i.e., HIV).

It is important to note that reporting of racial and ethnic status is subject to misclassification. Particularly in the area of mortality, information is often reported by someone other than the individual. For these reasons, combined with small numbers for Ohio, we did not report further breakout of mortality rates for Asian/Pacific Islanders and Hispanics by sub-groups. Mortality statistics nationwide may significantly underestimate the mortality of minorities, particularly Native Americans/Alaska Natives.¹

Based on work from the National Center for Health Statistics and the Census Bureau,² Census 2000 respondents that identified themselves as being of an “other” race or of multiple races were assigned (bridged) to one of the following four race categories specified under the 1997 standards: White, Black, American Indian/Eskimo/Aleut and Asian/Pacific Islander. As in prior years, there was also a separate question to assess ethnicity as either Hispanic or non-Hispanic. Hispanics may be of any race.

All calculated rates are based on populations enumerated in the 2002 estimates of bridged race categories from the Census Bureau. Comparisons with mortality data calculated with the 1990 population standard should not be utilized.

In 1999, the Ninth Revision of the International Classification of Diseases (ICD-9), used to classify causes of death, was replaced with the Tenth Revision (ICD-10). Please note that this change affected the computation of mortality rates and analyses of mortality data over time. More than 55 percent additional deaths are classified to Alzheimer’s disease in ICD-10 than in ICD-9. These changes are also reflected as increases of more than 19 percent and 23 percent, respectively, in the number of deaths classified to septicemia and kidney disease. The number of deaths classified to influenza and pneumonia decreased by 30 percent.

Recommendations from the National Center for Health Statistics^{3,4} and the Family Health Outcomes Project⁵ were followed to produce the Ohio Mortality results by race. These recommendations included the following:

- In cases where there were fewer than 20 deaths, age-adjusted mortality rates are not presented. When rates are based on small numbers or events, random error can affect the usefulness of the data and associated confidence intervals can be relatively wide. Based on this rule, we did not present age-adjusted rates for American Indian/Alaska Natives for 2002, and were only able to present age-adjusted mortality rates for the top three or four leading causes of death in 2002 for Asian/Pacific Islander and Hispanics.
- In order to counteract the random error for small numbers (numerator less than 20); multiple-year data were utilized to obtain age-adjusted mortality rates. Three years of mortality data were combined to allow calculation of additional age-adjusted death rates for minority groups such as Hispanics and Asian/Pacific Islanders and American Indian/Alaska Natives.
- To test for statistically significant differences between groups, we employed paired comparison tests using the white race for each paired comparison. In instances where the number of deaths were 100 or more, we utilized a z-test to test for statistically significant differences. To test for statistically significant differences between groups when the number of deaths was less than 100, we utilized the confidence interval overlap method.
- Mortality trends by race were presented by combining three years of mortality data, calculating an age-adjusted rate and comparing the rates over distinct time periods (i.e., 1994-1996, 1997-1999 and 2000-2002).

REFERENCES USED IN THIS DATA BULLETIN

¹Support Services International, Inc. 1996. Adjusting for Miscoding of Indian Race on State Death Certificates, Rockville, MD: Indian Health Service, November, 1996, 36 pp.

²National Center for Health Statistics. Estimates of the July 1, 2000-July 1, 2002, United States resident population from the Vintage 2002 postcensal series by year, county, age, sex, race, and Hispanic origin, prepared under a collaborative arrangement with the U.S. Census Bureau. 2003.

³Anderson RN, Rosenberg HM. Age Standardization of Death Rates: Implementation of the Year 2000 Standard. National vital statistics reports; vol 47 no 3. Hyattsville, Maryland: National Center for Health Statistics. 1998.

⁴Hoyert DL, Arias E, Smith BL, Murphy SL, Kochanek KD. Deaths: Final Data for 1999. National vital statistics reports; vol 49 no 8. Hyattsville, Maryland: National Center for Health Statistics, 2001.

⁵McCandless RR, Oliva G. Guidelines for statistical analysis of public health data with attention to small numbers. Family Health Outcomes Project at the University of California, San Francisco, 2002.

Minority Health Profile
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by Race and Ethnicity



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