

# Racial Differences in Diabetes Prevalence, Awareness, and Treatment

## Findings from the National Health and Nutrition Examination Surveys (NHANES) III and 1999–2000

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### Abstract

Racial differences in risk factors for cardiovascular disease have been documented, but not all risk factors have been updated to reflect current national data. This study updates current knowledge of diabetes prevalence, awareness, and treatment rates nationally among black and white adults by comparing NHANES III to that of NHANES 1999–2000. A descriptive analysis of NHANES trends and differences among black and white adults 20 years of age and older was conducted. Diabetes prevalence changed only slightly: among blacks, from 10% in NHANES III to 11% in NHANES 1999–2000, and, among whites, from 7% to 8%. Black women have twice the prevalence of diabetes compared with white women (14% vs. 7%), and prevalence is similar among black and white men (7% vs. 9%). Prevalence among blacks aged 60 and older is greater than twice that of similarly aged whites (35% vs. 16%). Diabetes awareness in NHANES 1999–2000 has not changed significantly since NHANES III. Awareness is higher among blacks than whites (70% vs. 65%). Black men are more likely to be aware of their diabetes than black women (83% vs. 64%), and blacks aged 40–59 have higher awareness than whites of this same age group (64% vs. 56%). Treatment rates with prescription medications increased 26% among blacks and 11% among whites since NHANES III, with current rates from NHANES 1999–2000 higher among blacks than whites (59% vs. 46%). Black men have a higher treatment rate than black women (73% vs. 53%), while the rate is about 45% among white men and white women. In all age groups, blacks have higher treatment rates than whites. Significant differences in diabetes prevalence exist between black and white women, and between blacks and whites aged 60 and older. While awareness and medication treatment rates are higher among blacks than whites, levels for both races are not optimal, and education and disease management efforts are warranted.

### Objective

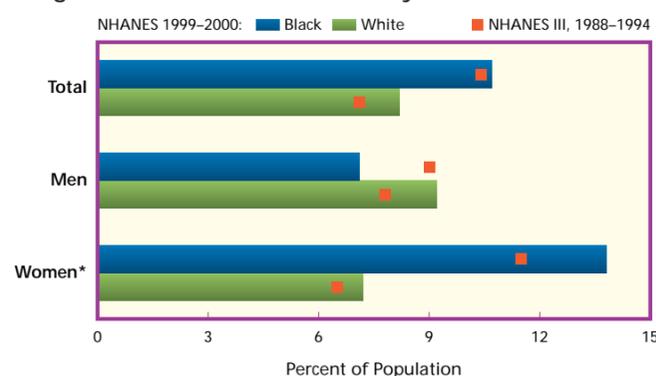
- To describe differences in prevalence, awareness, and treatment of diabetes among black and white adults by comparing the National Health and Nutrition Examination Surveys (NHANES) III and 1999–2000.

### Methods

- Analysis of diabetes prevalence, awareness and treatment was based on interview, physical examination and laboratory test results from the NHANES III and 1999–2000 surveys.
- NHANES subsets were restricted to non-Hispanic black and non-Hispanic white adults 20 years and older.
  - NHANES III sample size: 4,709 blacks and 7,121 whites
  - NHANES 1999–2000 sample size: 861 blacks, 1,986 whites
- Diabetes definition – persons classified as having diabetes if they reported in the NHANES interview having been told by a physician they have diabetes or if their fasting plasma glucose was greater than or equal to 126 mg/dl. The morning examination subset of the NHANES sample was used. Persons were classified as having undiagnosed diabetes if they tested positive but reported no previous diagnoses.

### Results

Figure 1. Prevalence of Diabetes by Race and Gender

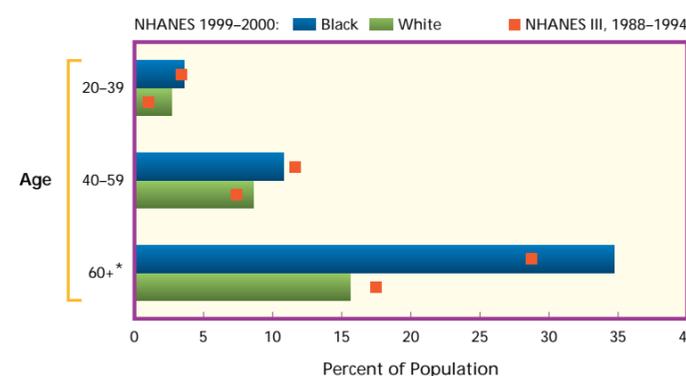


\* $p \leq 0.05$  — Difference in black/white rates 1999–2000

- Current diabetes prevalence among blacks exceeds that among whites, 11% vs. 8%.

- Diabetes prevalence has not significantly changed since NHANES III, when estimates were 10% among blacks and 7% among whites.
- Diabetes is about twice as prevalent in black females (14%) as it is in white females (7%).

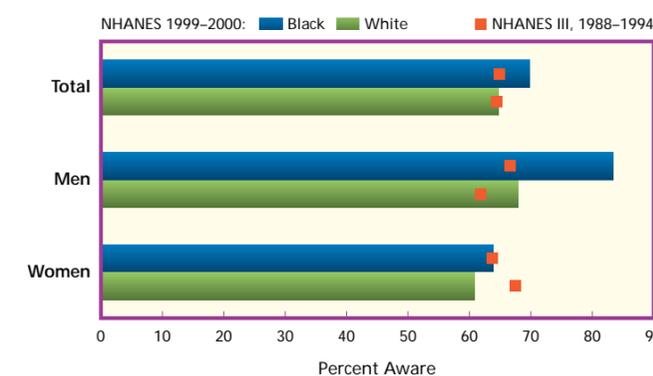
Figure 2. Prevalence of Diabetes by Race and Age



\* $p \leq 0.05$  — Difference in black/white rates 1999–2000

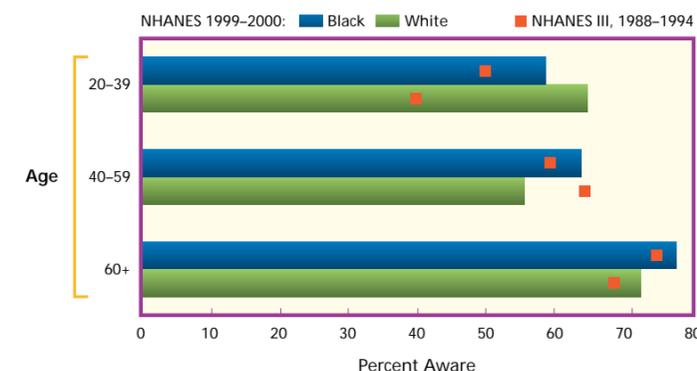
- Diabetes prevalence among blacks 60 years of age and older is more than twice that of their white counterparts, 35% compared with 16%.

Figure 3. Awareness of Diabetes Among Prevalent Cases by Race and Gender



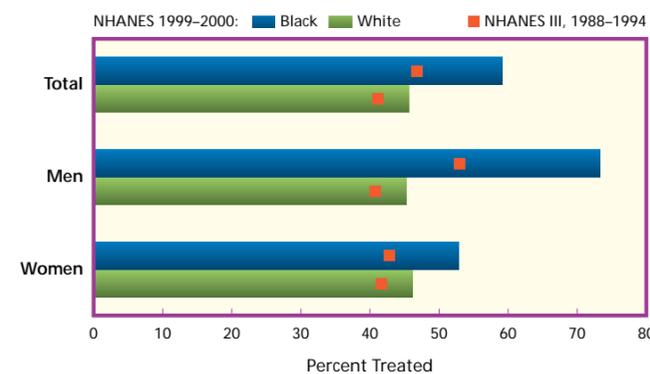
- In NHANES 1999–2000, there was no significant difference in total diabetes awareness rates among blacks and whites, (70% vs. 65%).
- At 83%, black men have the highest diabetes awareness rate.

Figure 4. Awareness of Diabetes Among Prevalent Cases by Race and Age



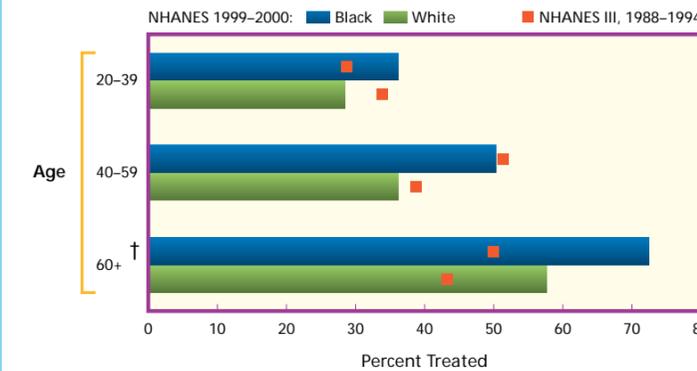
- Middle-aged blacks are more aware of their diabetes than similarly aged whites, 64% vs. 56%.
- 78% of blacks 60 years and older are aware of their diabetes.
- 65% of whites age 20–39 are aware of their diabetes compared with 59% of blacks in this age group.

Figure 5. Treatment of Diabetes Among Prevalent Cases by Race and Gender



- Blacks with diabetes have a higher treatment rate than whites (59% vs. 46%), up from 47% and 41%, respectively, since NHANES III.
- Black men have a higher treatment rate than black women, 73% vs. 53%.

Figure 6. Treatment of Diabetes Among Prevalent Cases by Race and Age



† $p \leq 0.05$  — Difference in same race rates over time

- In all age groups, blacks have higher treatment rates than whites, with the highest treatment rate reported among black men aged 60 and older (72%).
- With the exception of eldest blacks, treatment rates have not significantly improved over time among other age groups in either race.

### Conclusions

- The prevalence of diabetes in the black population exceeds that of the white population and black females are twice as likely to have diabetes than are white females.
- Diabetes awareness for both racial groups has not changed significantly since NHANES III and current awareness rates are comparable.
- Blacks with diabetes have a higher treatment rate than do whites, but treatment rates for both races are less than optimal. Education and disease management efforts are warranted.