

# Age, Race, and Cardiovascular Outcomes in African American Veterans

## PUBLICATION

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## ABSTRACT

**Background:** In the general population, compared with their White peers, African Americans suffer premature all-cause and cardiovascular (CV) deaths, attributed in part to reduced access to care and lower socioeconomic status. Prior reports indicated that younger (aged 35 to 44 years) African Americans had a significantly greater age-adjusted risk of death. Recent studies suggest that in a more egalitarian health care structure than typical United States (US) health care structures, African Americans may have similar or even better CV outcomes, but the impact of age is less well known.

**Methods:** We examined age stratified all-cause mortality, and incident coronary heart disease (CHD) and ischemic stroke in 3,072,966 patients (547,441 African American and 2,525,525 White) with an estimated glomerular filtration rate (eGFR) >60 mL/min/1.73m<sup>2</sup> receiving care from the US Veterans Health Administration. Outcomes were examined in Cox models adjusted for demographics, comorbidities, kidney function, blood pressure, socioeconomics and indicators of the quality of health care delivery.

**Results:** African Americans had an overall 30% lower all-cause mortality ( $P < .001$ ) and 29% lower incidence of CHD ( $P < .001$ ) and higher incidence of ischemic stroke (aHR, 95%CI: 1.16, 1.13-1.18,  $P < .001$ ). The lower rates of mortality and CHD were strongest in younger African Americans and attenuated across patients aged  $\geq 70$  years. Stroke rates did not differ by race in persons aged  $< 70$  years.

**Conclusions:** Among patients with normal eGFR and receiving care in the Veterans Health Administration, younger African Americans had lower all-cause mortality and incidence of CHD and similar rates of stroke, independent of demographic, comorbidity and socioeconomic differences. The lower all-cause mortality persisted but attenuated with increasing age and the lower incidence of CHD ended at aged  $\geq 80$  years. The higher incidence of ischemic stroke in African Americans was driven by increasing risk in patients aged  $\geq 70$  years suggesting that the improved cardiovascular outcomes were most dramatic for younger African Americans."

## RESEARCH HIGHLIGHTS

- African Americans have a higher risk for cardiovascular (CV) related disorders than their Caucasian peers. In a previous study, the researchers found that African Americans with chronic kidney disease (CKD) or end stage renal disease (ESRD) receiving care through the US Veterans Health Administration (VHA) had similar or better all-cause mortality and CV event rates compared with Caucasians. Given the positive health outcomes and that the VHA typically provides treatment in a more democratic way, the authors examined all-cause mortality and CV event rates in more than 3 million veterans receiving care in the VHA.
- After stratifying by age and determining causes of death, the researchers found that African American veterans younger than 60 years old who received care at the VHA experienced a lower risk of death due to all causes than African Americans in the general population. Additionally, veterans experienced a lower incidence of CHD than their Caucasian peers.
- Findings show a dramatic difference in African American's risk for CV when receiving care at the VHA. Additional studies are needed to better understand factors that influence CV risk among African Americans. Factors future researchers might explore include veteran status, social networks, differences in care from the VHA compared to non-VHA facilities, physical activity level, and socioeconomic opportunities.



## IMPLICATIONS

### FOR PRACTICE

Veterans should continue scheduling regular wellness visits with their physicians along with sickness visits. Given the importance of preventive care, during medical appointments, veterans should discuss any changes in their medical history and subsequent concerns with their physician. Clinicians should discuss with their veterans strategies to reduce risk for chronic conditions, including cardiovascular (CV) diseases. In addition to discussing genetic predispositions, clinicians should consider discussing a balanced diet, exercise, and constructive ways to reduce stress. Given that veterans receiving care at the Veterans Health Administration (VHA) had a lower all-cause mortality and lower incidence of coronary heart disease (CHD), African American veterans should consider seeking care at the VHA, especially those with a family history of heart disease. Non-VHA facilities should examine how services can be improved to positively affect the health outcomes of their patients, especially groups with a history of medical mistreatment. Family members of veterans should continue encouraging their veteran to prioritize their health, which includes regular visits with a healthcare provider.

### FOR POLICY

Based on these findings, the Department of Veterans Affairs (VA) might continue its practices of care that focus on preventing disease and extending life. Given that African American veterans 60 years and older did not see the same positive health outcomes, the VHA might continue exploring how it can improve the health of all African American veterans receiving care at VHA facilities. Additionally, the VHA might continue offering health education to veterans, especially as it relates to reducing one's risk for CV diseases, including remaining physically active after separating from the military. To improve the health of all veterans, including those who do not receive treatment at a VHA facility, the VHA might consider outlining and distributing its best healthcare practices for other health providers. Continuing efforts to improve the health of veterans, especially veterans with a higher risk for CV diseases, the VHA might explore factors that contribute to CV diseases, including CHD. To help veterans at risk for CV diseases reduce their risk, the VHA might collaborate with non-VHA facilities. Collaborating with non-VHA facilities could help the VHA reach more veterans and improve health outcomes for all veterans, including African Americans. Given the importance of both prevention and treatment, policymakers might continue introducing policies that make healthcare accessible.

### FOR FUTURE RESEARCH

A limitation of this study is that the sample consisted primarily of men. Despite the findings not stratified by age being comparable to women, future research on CV diseases in African American veterans should include a larger proportion of women veterans. Future researchers should examine factors that contribute to African Americans' risk for CV diseases. Given that veterans younger than 60 years old had better health outcomes than veterans 60 years and older, researchers should also examine how to improve the health of African American veterans as they age. In addition to stratifying by age, future researchers should consider stratifying by other factors that could influence both risk and outcomes, such as gender. The researchers' findings likely reflect important socio-cultural and access to quality care mediated differences. More research is needed on differences in access to care and socio-cultural beliefs among African American veterans. It would also be beneficial to study health system-specific factors and other variables that vary systematically between African American veterans and Caucasian veterans, such as education and income. Researchers should also study these factors and other social determinants of health that vary systematically between veteran and non-veteran African Americans.

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