Race-based prescribing for Black people with high blood pressure shows no benefit

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Generations of physicians have been taught that Black people with high blood pressure should be treated with a narrower range of medication options than all other racial groups. This race-based approach to prescribing has no apparent patient benefit, according to a UC San Francisco study.

The guidance could also be limiting access to medications that could achieve better overall health outcomes in Black patients, say the authors of the study published Jan. 13, 2022, in the *Journal of the American Board of Family Medicine*.

"Race provides a poor proxy for precision medicine," said first author Hunter K. Holt, MD, MAS, who did the work as a primary care research fellow in the UCSF Department of Family and Community Medicine. He is now at the University of Illinois Chicago. "Our study provides evidence that race-based prescribing is ineffective, unwarranted and may even be detrimental to Black patients in the long run."

Practice guidelines have long recommended that Black patients with high blood pressure and no comorbidities be treated initially with a thiazide diuretic or a calcium channel blocker (CCB) instead of an angiotensin converting enzyme inhibitor (ACEI) and/or angiotensin receptor blocker (ARB). By contrast, non-Black patients can be prescribed any of those medicines regardless of comorbidities. While these guidelines were based on evidence from clinical trials, the interpretation of this evidence has come under intense scrutiny.

In the UCSF study the researchers sought to determine how closely physicians are following the race-based guidance. They also examined how effective the treatments were at managing patients' blood pressure.

They analyzed two years of electronic health records data from 10,875 patients with hypertension in the San Francisco Bay Area. The patients were on one- or two-drug regimens including ACEI, ARB, thiazide diuretics, or CCB. Of the patients studied, 20.6% of the patients were identified as Black.

The data show that, on average, primary care doctors are following race-based recommendations by prescribing ACEI/ARBs to Black patients far

less frequently compared to non-Black patients (42.3% of non-Black patients were on ACEI/ARBs vs. 18.6% of Black patients).

However, Black patients still tended to have more poorly controlled blood pressure than non-Black patients. Almost half (46.4%) of the Black patients had uncontrolled hypertension compared to 39% of non-Black patients.

Also, median blood pressure was similar for Black and non-Black people regardless of which medications were prescribed. For each drug regimen, there was more variation in hypertension control within each group than between Black and non-Black patients.

The researchers conclude that race-based prescribing is widespread but likely not warranted by observational data.

Furthermore, the guidelines may be limiting treatment options for Black patients causing delays in achieving optimal blood pressure control. For example, ACEIs and ARBs are important in the treatment of chronic kidney disease, which is often underrecognized and underdiagnosed in primary care. Avoiding these drugs may inadvertently contribute to worse outcomes for undiagnosed chronic kidney disease in Black patients.

Other Factors More Important Than Race

"It's clear that selection of hypertension medication should be tailored to the individual, rather than driven by considerations of race," said senior author Michael B. Potter, MD, a professor of Family and Community Medicine and director of the San Francisco Bay Collaborative Research Network. "Physicians shouldn't settle for anything else but excellent blood pressure control in their patients and should make use of all available options to achieve this."

According to the authors, other factors may be more important than considerations of race, such as dose, the addition of second or third drugs, medication adherence, and dietary and lifestyle interventions. Follow-up care was important, and the Black patients who had more frequent clinical encounters tended to have better control of their blood pressure. The researchers said social and environmental factors like lack of access to healthy food, unstable housing, social isolation, and difficulties paying bills also deserve greater attention.

"Race-based guidelines distract clinicians from providing targeted interventions that address known social determinants of health and from addressing implicit biases that disproportionately and negatively impact Black patients," said Holt. "Now is the time for more research to better understand whether the guidelines that were intended to rectify the racial health disparities may actually be further contributing to the divide."

More information: Hunter K. Holt et al, Differences in Hypertension Medication Prescribing for Black Americans and Their Association with Hypertension Outcomes, *The Journal of the American Board of Family Medicine* (2022). DOI: 10.3122/jabfm.2022.01.210276

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