

# Why clinical algorithms fall short on race

OCT 8, 2020

**Andis Robeznieks**

Senior News Writer

---

Recent publications detail how the clinical algorithms used to guide treatments may mistakenly substitute and equate racial data for genetic and other information and their use may lead to less-than-optimal care.

“Race is not a reliable proxy for genetic difference” is the phrase used by researchers in “Hidden in Plain Sight—Reconsidering the Use of Race Correction in Clinical Algorithms,” an article published in *The New England Journal of Medicine (NEJM)*.

The article prompted Rep. Richard E. Neal, D-Mass., chair of the House Ways and Means Committee, to ask the AMA and other medical societies what they were doing to address health inequities, in general, and to end misuse of race and ethnicity in clinical algorithms in particular.

The AMA responded with a nine-page letter that outlines the multitude of ongoing or previously completed AMA work to address health equity issues, as well as includes recommendations for federal research that reviews clinical algorithms.

“The AMA has long recognized that racial and ethnic health inequities are an unjust and major public health reality in the United States,” wrote AMA Executive Vice President and CEO James L. Madara, MD, wrote in the response. “Understanding that race is a social and political construct and not a risk factor for disease and death, the AMA has publicly acknowledged that racism impacts public health and is a barrier to effective medical diagnosis and treatment.”

## Adjustment needs adjustment

The *NEJM* article looked at how the use of race and ethnicity data into diagnostic algorithms and practice guidelines to adjust outputs altered risk assessment and clinical decision-making in cardiology, nephrology, obstetrics and urology.

“Many of these race-adjusted algorithms guide decisions in ways that may direct more attention or resources to white patients than to members of racial and ethnic minorities,” the article says.

“The racial differences found in large data sets most likely often reflect effects of racism—that is, the experience of being Black in America rather than being Black itself—such as toxic stress and its physiological consequences,” the article says. “In such cases, race adjustment would do nothing to address the cause of the disparity.”

Dr. Madara cited the *NEJM* article’s point—that “race is a poor proxy for genetics”—in his letter to Neal.

The AMA “recognizes that some clinicians and researchers may unknowingly or unintentionally conflate ‘race’ with ‘racism,’” his letter states. “In other words, the AMA is mindful that the myriad effects of racism, rather than race, are responsible for differences in health status and outcomes often attributed to race.” Also mentioned, and a focus of considerable AMA attention, are the effects of social determinants of health on a person’s risk of poor outcomes from a medical procedure.

After the *NEJM* article was published, the AMA reached out to medical specialty societies and is now engaged in active discussions regarding how best to address the issues raised in the report.

The letter also discusses related AMA policies, including one adopted in 2018 stating that clinically validated augmented intelligence (AI) in health care should “identify and take steps to address bias and avoids introducing or exacerbating health care disparities including when testing or deploying new AI tools on vulnerable populations.”

In June, the AMA Board of Trustees pledged action to confront systemic racism, and acknowledged that racism “is an urgent threat to public health, the advancement of health equity, and a barrier to excellence in the delivery of health care,” Dr. Madara wrote.

## Federal government’s role

The federal government can help, the AMA suggests, by taking the following measures:

- Fund research to identify and evaluate the factors for which race and ethnicity currently serve as proxies in clinical algorithms.
- Review its use of clinical algorithms to ensure that they are not inappropriately using race as a proxy for other factors such as racism, and review any algorithms used by the federal government to ensure they do not inadvertently further exacerbate inequities.
- Fund pilot studies in high-priority areas such as renal disease and obstetrical care to identify high-risk individuals and test interventions to reduce the modifiable contributors to

heightened risk.

“The AMA recognizes the need to evaluate policy with an eye toward unintended consequences and avoidable harm, using an equity lens to evaluate potential outcomes, particularly for those that stand to be most harmed,” Dr. Madara wrote.

The AMA has compiled COVID-19 health equity resources to shine a light on structural issues that contribute to and could exacerbate existing inequities. The AMA COVID-19 health equity initiatives across the United States website highlights efforts using an equity lens to curb the COVID-19 epidemic.