Risk models for T2DM overestimate risk for non-Hispanic whites

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Risk models for type 2 diabetes overestimate risk for non-Hispanic

Whites, according to a study published online May 17 in *PLOS Global Public Health*.

Héléne T. Cronjé, M.S.P.H., from the University of Copenhagen in Denmark, and colleagues used National Health and Nutrition Examination Survey data between 1999 and 2010 to examine whether the Prediabetes Risk Test, (PRT) issued by the National Diabetes Prevention Program, and two prognostic models, the Framingham Offspring Risk Score and the Atherosclerosis Risk in Communities (ARIC) Model, demonstrate racial bias between non-Hispanic Whites and non-Hispanic Blacks. Data were included for 9,987 adults without a prior diagnosis of diabetes and with fasting blood samples available.

The researchers found that across the survey years, all investigated models were found to be miscalibrated with respect to race. The Framingham Offspring Risk Score overestimated and underestimated the risk for type 2 diabetes for non-Hispanic Whites and non-Hispanic Blacks, respectively. For both races, the PRT and ARIC models overestimated risk, more so for non-Hispanic Whites.

"Our study shows that the PRT currently adopted by U.S. health care, and prognostic type 2 diabetes prediction models available for adoption in U.S. health care, are likely attached with some degree of racial bias, which in turn is likely to perpetuate inequalities by providing fewer benefits to minorities, who already demonstrate higher risk for metabolic diseases," the authors write.

  More information: Héléne T. Cronjé et al, Assessing racial bias in type 2 diabetes risk prediction algorithms, *PLOS Global Public Health* (2023). DOI: 10.1371/journal.pgph.0001556

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