

Oxygen saturation overestimated in minority COVID-19 patients

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Asian, Black, and Hispanic patients with COVID-19 have persistent

overestimation of arterial oxygen saturation, according to a study published online May 31 in *JAMA Internal Medicine*.

Ashraf Fawzy, M.D., M.P.H., from the Johns Hopkins University School of Medicine in Baltimore, and colleagues conducted a retrospective cohort study of clinical data for COVID-19 patients who self-identified as Asian, Black, Hispanic, or White from five referral centers and [community hospitals](#). Concurrent measurements of oxygen saturation levels were conducted in arterial blood (SaO₂) and by [pulse oximetry](#) (SpO₂); the proportion of patients with occult hypoxemia was compared by race and ethnicity. A total of 1,216 patients had 32,282 concurrently measured SpO₂ and SaO₂.

The researchers found that occult hypoxemia occurred in 30.2, 28.5, and 29.8 percent of Asian, Black, and non-Black Hispanic patients compared to 17.2 percent of White patients. SpO₂ overestimated SaO₂ by an average of 1.7, 1.2, and 1.1 percent among Asian, Black, and non-Black Hispanic patients, respectively, compared with White patients. Black and non-Black Hispanic patients had a lower risk of treatment eligibility recognition (hazard ratios, 0.71 and 0.77, respectively). Overall, 23.7 percent of patients never had their treatment eligibility recognized; 54.8 percent of these patients were Black. Of the patients who had eventual recognition of treatment eligibility, Black patients had a median delay of 1.0 hour compared with White patients.

"Differential inaccuracies in pulse oximetry should be examined as a potential explanation for disparities in COVID-19 outcomes and may have implications for the monitoring and treatment of other respiratory illnesses," the authors write.

One author disclosed financial ties to the [pharmaceutical industry](#).

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