Experts Call for Non-Biased Lung Disease Test

Medical professionals are questioning the use of spirometry, the most common lung function test, on Black patients.

October 18, 2022 By Laura Schmidt

In an essay published in the Journal of Hospital Medicine, a group of researchers argue that spirometry, the most common lung function test, often fails to detect lung disease in Black patients and urge medical professionals to explore new testing methods for screening for asthma, chronic obstructive pulmonary disease and other lung diseases.

Spirometry measures how much air a person breathes into their lungs and how much air they can exhale quickly. The results are then compared with average healthy values based on characteristics such as height, age, sex and race.

Because past studies have found that Black patients tend to have lower lung function, spirometry results are adjusted for race. However, such adjustments don't factor in social determinants of health—such as exposure to air pollution based on residence, type of employment and lack of access to health care—nor do they take into account genetic factors. The result is poor lung health among Black people is normalized and diagnoses are delayed, contributing to the persistence of health disparities.

A study that examined 14,000 spirometry test results between 2010 and 2020 found an increase in the diagnosis of lung disease and other pulmonary defects in Black patients once race was removed as a factor in in the interpretation of results.

"We've decided in the United States that it's 'normal' for Black people to have lower lung function than white people," said Ravi Kalhan, MD, MS, deputy division chief of pulmonary and critical care at Northwestern University, in a USA Today article. "Race-specific equations result in us not diagnosing lung disease in Black people—despite quite high prevalence."

The authors of the essay in the Journal of Hospital Medicine advocate for medical professionals to cease all use of race-based spirometry, arguing that accepting race as a factor "impedes the examination of other social, environmental, and genetic factors as drivers of disease."

What's more, they stated, "It leads to the underdiagnosis of pulmonary disease in racial minority

patients and impacting timely diagnosis, access to effective treatments, and ultimately outcomes.”

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