

# Research aims to identify better COPD diagnosis in African American patients

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Recently published research suggests that despite showing clear symptoms of chronic obstructive pulmonary disease (COPD), many African Americans are not officially diagnosed with the disease due to

flaws in diagnosis methods. The Research was led by National Jewish Health and recently published in the *Journal of General Internal Medicine* from the COPDGene study.

Fixed-ratio spirometry, a standard method of measuring respiratory capacity, has long been used as a method of detecting COPD. The study's data compared COPD diagnoses by fixed-ratio spirometry findings and outcomes by race. Data then shows that 21% more of the results for African American patients were classified as non-COPD using the fixed-ratio method, even though many of them had symptoms suggesting a COPD diagnosis. In some cases, these patients already had signs of emphysema on their CT scans. These findings show that current diagnosis of COPD using only spirometry may fail to diagnose COPD in African Americans.

"African American patients' COPD is often missed because they are frequently exposed to various kinds of deprivation that seems to result in smaller lungs with comparatively better airflow. When the two aspects of spirometry are combined in a mathematic ratio (airflow/lung volume) the number is higher than would otherwise be expected, leading to the conclusion that they do not have COPD or other [lung problems](#)," said Elizabeth Regan, MD, Ph.D., physician researcher at National Jewish Health and first author on the study.

Participants examined in the study were current or former smokers with more than a 10 pack-year smoking history. They were enrolled in 21 clinical centers around the country. The study recruited participants with known COPD, including both non-Hispanic whites and African Americans. There was an exclusion for pre-existing non-COPD [lung](#) disease, except for a history of asthma.

Continued research aims to determine a more effective metric to assess COPD risk in African American patients, to improve early detection and

reduce the risk that COPD symptoms are overlooked due to racial factors. "Now that we've revealed the gap, we can start to bridge it," Dr. Regan concluded. "Better diagnostic tools will lead to better care for all of our patients, regardless of background."

**More information:** Elizabeth A. Regan et al, Use of the Spirometric "Fixed-Ratio" Underdiagnoses COPD in African-Americans in a Longitudinal Cohort Study, *Journal of General Internal Medicine* (2023). [DOI: 10.1007/s11606-023-08185-5](https://doi.org/10.1007/s11606-023-08185-5)

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