# New chronic lung disease guidelines over-diagnose older men and under-diagnose younger women

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New guidelines for diagnosing chronic lung disease (chronic obstructive pulmonary disease or COPD), should be modified because they over-diagnose COPD in older men and under-diagnose COPD in young women.

Writing in *The BMJ* this week, Professor Martin Miller and Dr Mark Levy say up to 13% of people thought to have COPD under the new criteria have been found to be misdiagnosed.

They argue that clinicians should use internationally agreed standards when assessing patients for COPD. This, they say, will help to improve patient care through more accurate diagnosis, as well as save money by reducing admissions resulting from misdiagnosis and inappropriate therapy.

The prevalence and mortality of COPD is increasing globally. Smoking accounts for 75% of cases and the condition contributes to an annual cost of £800m (€1bn; $1.24bn) in the UK.

Despite concern that COPD is severely under-diagnosed in the UK, particularly among people with early stages of the disease who could benefit from preventive strategies, Miller and Levy argue that current diagnostic criteria "are leading to over-diagnosis in some groups."

They explain that in 2001, the Global Initiative for Obstructive Lung Disease (GOLD) set out a new, "simple" diagnostic threshold for airway obstruction as an alternative to the internationally accepted lower limits of normal (LLN) criterion.

The GOLD definition estimates COPD prevalence at 22% in those aged over 40 years in England and Wales compared with 13% using LLN criteria.

It also misses one in eight cases of airflow obstruction identified by the LLN, particularly among younger women.

Nevertheless, GOLD has subsequently been adopted by the UK National Institute for Health and Care Excellence (NICE) and is also widely used in the United States, Europe, and Australasia.

Miller and Levy point to evidence suggesting that up to 13% of people thought to have COPD on GOLD criteria have been found to be misdiagnosed.

Misdiagnosing patients may lead to poorer outcomes, they warn, "because of adverse effects of inappropriate medication or incorrect treatment."

For example, people meeting only the GOLD criterion for COPD have a higher prevalence of heart disease than people who meet both LLN and GOLD criteria, they explain.

Furthermore, use of inhaler treatment for COPD increases the likelihood of developing severe pneumonia. "Patients with misdiagnosed COPD are exposed to these risks for no benefit," they write.

They believe that the current NICE guidelines and the GOLD strategy

documents for COPD "should be modified because they over-diagnose COPD in older men while missing the possibility of diagnosing heart disease; they also under-diagnose COPD in young women."

They argue that clinicians should use the LLN instead when assessing patients for COPD, and call on editors of respiratory journals and their reviewers to "increasingly challenge authors to examine the effect of different methods of diagnosis on their results."

**More information:** Chronic obstructive pulmonary disease: missed diagnosis versus misdiagnosis, *The BMJ*, www.bmj.com/cgi/doi/10.1136/bmj.h3021

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