

# Revisiting spirometry for the diagnosis of COPD

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**A** Guideline Update<sup>1</sup> published in September 2003 summarized the Global Strategy for the management of chronic obstructive pulmonary disease (COPD).<sup>2</sup> The evidence in that report recommended against spirometry to “diagnose or assess severity of COPD.” However, the Agency for Healthcare Research and Quality (AHRQ) recently published new evidence<sup>3</sup> that supports limited use of spirometry for assessing the condition of COPD patients.

AHRQ’s Minnesota Evidence-Based Practice Center reviewed articles published from 1966–2005. Pertinent studies assessed outcomes for adults in primary care settings who were at risk for COPD according to race, age, gender, tobacco use, symptoms, and spirometric status. Excluded from the review were children, persons with asthma, and those with alpha-1 antitrypsin deficiency. The 169-page report had 82 references. The

evidence was not explicitly graded, which made it difficult to interpret the significance of each recommendation.

The authors cautioned against widespread spirometric testing of COPD patients. They cited expense of spirometry, resulting treatment costs, resource utilization expense, and personnel time. There is risk of labeling a large number of individuals as diseased who would not benefit from treatment.

## REFERENCES

1. Holten, K.B. How should we manage an acute exacerbation of COPD? *J Fam Pract* 2003; 52:780–782.
2. Global Initiative for Chronic Obstructive Lung Disease. Global strategy for the diagnosis, management, and prevention of chronic obstructive pulmonary disease. Available at: [www.goldcopd.com/revised.pdf](http://www.goldcopd.com/revised.pdf).
3. Wilt TJ, Niewoehner D, Kim C, et al. Use of spirometry for case finding, diagnosis, and management of chronic obstructive pulmonary disease. Summary, Evidence Report/Technology Assessment: Number 121. AHRQ Publication Number 05-E017-1, August 2005. Rockville, Md: Agency for Healthcare Research and Quality. Available at: [www.ahrq.gov/clinic/tp/spirotp.htm](http://www.ahrq.gov/clinic/tp/spirotp.htm).

## Practice recommendations

- The primary usefulness of spirometry is in identifying persons who will benefit from pharmacologic treatment to alleviate exacerbations (by confirming bronchodilator responsiveness).
- Reserve spirometry for those with activity-limited respiratory symptoms to help target bronchodilator therapy (most beneficial in those with forced expiratory volume in 1 second (FEV<sub>1</sub>) 50% or less of predicted value).

- Spirometry paired with clinical examination improves COPD diagnostic accuracy compared with clinical examination alone.
- Spirometry is useful in diagnosing COPD when patients have suggestive symptoms.
- Evidence does not support widespread use of spirometry to...
  - diagnose new cases of COPD in at-risk patients
  - improve smoking cessation rates
  - monitor the clinical course of COPD, or
  - adjust interventions

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