Many spirometers used in primary care deemed inaccurate

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(HealthDay)—Spirometers used in primary care offices are frequently
inaccurate, according to a study published online Sept. 6 in the Annals of the American Thoracic Society.

Matthew J. Hegewald, M.D., from Intermountain Healthcare in Murray, Utah, and colleagues tested 17 spirometers used in primary care offices with a waveform generator to assess spirometer accuracy. They determined the clinical significance of inaccurate instruments by applying the forced expiratory volume in one second (FEV1)/forced vital capacity (FVC) error from an obstructed waveform to a clinical data set.

The researchers found that only one of the spirometers met the accuracy criteria, with mean errors ranging from 1.7 to 3.1 percent for FVC, FEV1, and FEV1/FVC. Twenty-eight percent of tests were re-categorized from obstructed to non-obstructed when applying the percent error to a clinical data set. Sixty percent of the spirograms reviewed were considered acceptable for clinical use. No correlation was seen between the number of tests performed by a clinic and quality of spirometry.

"Our results raise concerns regarding the utility of spirometry obtained in primary care offices without greater attention to quality assurance and training," the authors write.

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