

# Many spirometers used in primary care deemed inaccurate

September 15 2016

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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.

**More information:** [Full Text \(subscription or payment may be required\)](#)

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Citation: Many spirometers used in primary care deemed inaccurate (2016, September 15) retrieved 6 May 2024 from <https://medicalxpress.com/news/2016-09-spirometers-primary-deemed-inaccurate.html>

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