Baseline Spirometry Quality in the Primary Care Setting

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Purpose: To describe the baseline quality of spirometry testing sessions performed in primary care offices and to examine what provider and practice-level characteristics are associated with the percentage of testing sessions assigned an acceptable quality grade.

Methods: We analyzed 537 spirometry testing sessions submitted by practices from the control arm of a randomized controlled trial that assessed the effectiveness of a distance-learning spirometry training CD-ROM. Spirometry testing sessions with American Thoracic Society (ATS) grades of A or B were defined as "passing", and those graded C through F were defined as "failing". We conducted bivariate and multivariate analyses to examine the relationships between provider and practice characteristics and the percent of acceptable spirometry testing sessions conducted by an office.

Results: The overall quality of spirometry testing sessions was poor with only 7% (standard deviation (SD) = 11%) having passing quality grades among internal and family medicine offices and 25% (SD = 13%) with passing grades among pediatric offices. In adjusted analyses, the only characteristic associated with producing a significantly higher percentage of passing spirometry testing sessions was performance in a pediatric office as compared to a family medicine office (beta coefficient = 3.3; p=0.01).

Conclusions: The results of this study demonstrate that the baseline quality of spirometry testing in primary care offices is poor. These results suggest a deficit in the training of health care providers in the proper performance of this technique-dependent procedure and the need for more accessible, comprehensive training resources.

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