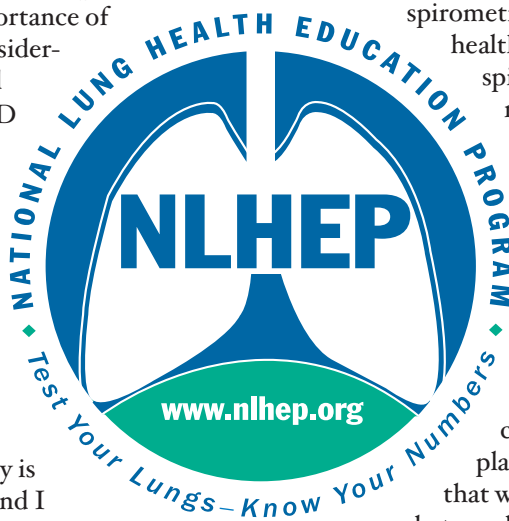


# NLHEP News

## Knowing the Numbers

“Test your lungs. Know your numbers.” This is the motto of the National Lung Health Education Program, which was developed to improve education about the importance of measuring lung health by spirometry. As respiratory physicians and therapists know, these numbers are the FEV<sub>1</sub> and the FVC (or FEV<sub>6</sub>). Ask any patient or physician about these numbers, and many physicians will admit they don’t feel comfortable with them, while the majority of patients will have never even heard of FEV<sub>1</sub> or FVC. Contrast this with measurement of blood pressure or cholesterol, and the vast majority of physicians and patients will recognize and appreciate the importance of these numbers. This is surprising, considering that FEV<sub>1</sub> is key to diagnosing and staging asthma and COPD; and COPD is currently the fourth, and soon to be the third, leading cause of death worldwide. It is also surprising because FEV<sub>1</sub> and FVC have been shown in numerous studies across diverse patient populations to correlate independently with important health outcomes, such as lung cancer, heart disease, stroke, and death from all causes.

To try to understand why spirometry is so poorly understood, my colleagues and I conducted a survey of the primary care community around Burlington, VT.<sup>1</sup> We also wished to see if we could improve knowledge and use of office spirometry by measuring the impact of a one-hour educational workshop. Our results were basically in line with other similar surveys that find that office spirometry is underutilized. In our case, only 50 percent of the practices responded to the survey after repeated mailings, perhaps revealing the lack of interest in this topic. Of those that did respond, only two-thirds of the practices owned a spirometer; and on average, they tested only half of their patients who had respiratory complaints or carried the diagnosis of asthma or COPD. Only half knew to diagnose airflow obstruction based on FEV<sub>1</sub>/FVC or knew that FEV<sub>1</sub> correlated with mortality from heart disease and stroke. The primary reason cited for not performing spirometry was uncertain impact of the test; but physician unfamiliarity, lack of training, and concerns about cost and reimbursement also ranked highly. The educational workshops were very well received; and after the workshops we were able to document a slight increase in the number of spirometry tests performed, but there remained a considerable number of barriers to performing spirometry.



What did we learn from this study? Physicians and health care workers were very pleased to have us visit their practice and provide the workshop for them. In particular, practices were surprised to learn that testing, interpretation, and quality control can be quite simple with modern office spirometers, that office spirometers are relatively inexpensive, and reimbursement is available. However, this high level of interest and enthusiasm was tempered by concerns about the time, cost, and logistics of testing. Moreover, physicians must be convinced of the importance of spirometry before they are willing to incorporate routine office spirometry into their practice. As respiratory health workers, we probably all agree that spirometry is important, especially in diagnosis, but supportive data are lacking. This issue was recently highlighted by the August 2005 report on spirometry in COPD developed by the Agency for Healthcare Research and Quality.<sup>2</sup> The report supported the prognostic significance of spirometry in COPD but called for further studies to determine whether spirometry enhances smoking cessation and can guide therapy of COPD. Our group plans to conduct future work in this area so that we can provide hard evidence in favor of what we all feel must be true about the importance of “knowing the numbers.” 🌬️



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### REFERENCES

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