



A query on FEV₁Q: it may be useful, but is it helpful?

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The new interpretive strategies for pulmonary function tests do not give guidance on meaningful changes over time for important indices covered in the prior document <https://bit.ly/3rbKMLl>

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To the Editor:

We read with great interest the new interpretive strategies for routine pulmonary function testing recently published in the *European Respiratory Journal* [1]. We appreciate the change in framing the assessment of pulmonary function over time from the amount of function lost to the amount that remains. Unfortunately, the discussion of this metric did not address some important aspects that clinicians use to monitor patients and make clinical decisions. The strategy for addressing natural changes in lung function over time utilises the FEV₁Q (*i.e.* the forced expiratory volume in 1 s (FEV₁) divided by the sex-specific first percentile values of the absolute FEV₁ values found in adults with lung disease, that is 0.4 L for women and 0.5 L for men) to predict survival, but does not mention other indices of pulmonary function that are commonly used to track changes over time. The authors state that over a short interval (and up to 1 year) the FEV₁Q in adults should be stable; however, it is not clear from their discussion what level of change constitutes the minimal important difference between measurements of the FEV₁Q. Also not addressed in this document is the discussion of other parameters used to monitor pulmonary function over time. Historically, these values (and their changes over time) have been used to guide treatment, make advanced referrals, and/or include subjects in clinical trials. The 2005 interpretive strategies [2] highlighted the significant changes in FEV₁, forced vital capacity (FVC), mid-expiratory flow at 25–75% of FVC, and diffusing capacity of the lung for carbon monoxide that should alert healthcare providers to meaningful changes in pulmonary function over time in the appropriate clinical context. Does the omission of these values signal they should no longer be tracked, or do the previously reported significant changes from the 2005 document continue to be the standard? In the 2005 document it was noted that when too many indices are tracked simultaneously the risk of false-positive indications of change is increased. Was the singular focus on FEV₁Q for monitoring change over time an attempt to reduce the risk of false-positives and simplify the process? If so, we fear that this will have the opposite effect, with many clinicians continuing to rely on disparate standards.