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EDITORIAL

Short, Simple, but Still of Uncertain Value

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This issue of the *Journal* includes a paper by Ringbaek and colleagues[1] suggesting that a short and simple measure of patient reported outcomes may provide much of the same information captured by the more complex standardized St. George's Respiratory Questionnaire (SGRQ)[2]. The paper raises several issues relevant to patient reported outcome assessment.

Why are PROs needed in outcome studies for COPD patients?

Patient reported outcome measures are used to measure health status from the patient perspective. In many chronic diseases, traditional physiologic assessments may be only minimally correlated with how patients describe their own level of wellness[3]. It has been argued that only two measures are of importance when assessing health outcomes; length of life, and quality of life[4]. If a treatment fails to extend the life expectancy and it fails to improve outcomes from the patient perspective, it might be argued that it has little value. Physiologic indicators are important because they are typically correlated with either life expectancy or quality of life. Impaired $FEV_{1.0}$, for example, predicts both shortened life expectancy and functional impairments, thus giving it meaning. Other indicators that are unassociated with life expectancy or quality of life do not offer information that can be used in a meaningful way.

Evaluation of quality of life is particularly important in COPD studies because few interventions have been shown to extend life expectancy. Lung volume reduction surgery, for example, does not result in improved survival, except in selected subgroups such those with both predominantly upper-lobe emphysema and low base-line exercise capacity[5]. Yet, the surgery might have value for improving functioning and the quality of life. Similarly, pulmonary rehabilitation does not make patients live longer, but it does improve their function and their life quality[6]. As a result, measures of patient reported experiences, including quality of life, are highly relevant to research and practice in pulmonary medicine[7].

What measures should be used?

Ringbaek and colleagues demonstrate that an 8 item COPD Assessment Test (CAT) and a 10 item COPD Clinical Questionnaire (CCQ) are substantially correlated with the more complex 50 item St. George's Respiratory Questionnaire (SGRQ)[1]. The shorter questionnaires did not use weighting algorithms and was simpler to complete. Should researchers and clinicians now be advised to switch from the longer and more complicated SGRQ to the shorter CAT and CCQ? Unfortunately, the answer still requires further evaluation. Although the correlations between the measures are high (above .73 in each case), patient reported outcome measures must be evaluated on the variety of other criteria. The SGRQ has gone through other evaluations that assess its responsiveness to clinical change and its capacity to offer meaningful information to clinicians. The SGRQ offers 4 different scores: symptoms,

1 The opinions expressed in this editorial are those of the author and do not necessarily represent those of the National Institutes of Health

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activity, impact, and total. In addition, extensive evaluative work identifies how many SGRQ units are required for the change to be considered clinically meaningful. For example, patients that change by 4 or more units on the SGRQ components are believed to have made meaningful progress[8].

Other studies of patient outcome require different metrics. One important trend is the evaluation of the cost/effectiveness of therapy. In order to evaluate the value of investing in treatments for COPD in comparison to the value of investing in other aspects of medical care, outcomes must be evaluated using a common metric. Most often, the metric is a combination of life expectancy and health-related quality of life. In order to perform these assessments, a more generic patient reported outcome measure is necessary. A COPD specific measure can be valuable for assessing COPD outcomes, but cannot be compared directly with a different metric that was used to assess that outcome of treatment for hypertension, total hip replacement, or other medical – surgical interventions. Such comparisons would be analogous to comparing apples to oranges. A variety of generic measures have been developed specifically for this purpose[9].

In summary, the CAT and CCQ offer short and simple assessments for outcomes in COPD. Evidence offered by Ringbaek and colleagues suggests that the measures may be short, simple, and inexpensive alternatives to more established approaches. But, we need continuing assessment before adoption can be recommended. If short, simple, and inexpensive measures perform as well as complex approaches, the choice is simple, yet short and simple may also create problems because patient reported outcomes are such an important component of the evaluation for COPD treatments. If the measures are less sensitive to change, for example, we might erroneously conclude that an effective treatment is not useful. Further, in our resource strained era, the evaluation of cost-effectiveness is becoming increasingly important. Economic analysis requires yet a different type of outcome assessment and generic measures may be needed to complement the disease specific approaches. Different tools are available for these different purposes and investigators must carefully tailor their choices to fit the purposes of their work.

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