

CONFERENCE ABSTRACT

The Assessment of Burden of COPD (ABC) tool: a shared decision-making instrument that is predictive of healthcare costs

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Background: The Assessment of Burden of COPD (ABC) tool is an instrument that supports shared decision making between patients and physicians. It includes a coloured balloon diagram to visualize a patient's scores on a questionnaire about the experienced burden of COPD and several objective severity indicators. An algorithm translates these scores into a treatment advice to be discussed with the patient. The resulting individual care plan includes personalized treatment goals framed in the patient's own words. In an 18-months cluster randomized controlled trial this tool was found to be effective in improving disease-specific quality of life.

Aim: The aim of this study was twofold. Firstly, to determine the importance of each item of the experienced burden of disease, from a patient-perspective, in order to calculate a weighted index score on a 0-100 scale. Secondly, to investigate whether the ABC Index score can be used to develop a grouping of COPD patients into mild, moderate, and severe burden of disease that is predictive of future healthcare utilization and costs.

Methods: The importance weights were determined in a discrete choice experiment (DCE) among 282 COPD patients and 252 members of the general public. Respondents received 14 choice questions; in each question they were asked which of two health states was more severe. Health states were described in terms of specific symptoms, limitations, mental problems, fatigue and exacerbations. Weights for each item-level combination were derived statistically from the likelihood of each health state to be considered worse than the other. Weights were re-scaled to a range from 0 (best) to 100 (worst). The capability of the ABC

Index to predict healthcare utilization and costs was explored by dividing the ABC Index into three classes (mild, moderate, severe burden of disease) and comparing the average resource utilization and costs per class. Multi-level regression models were used to find the most discriminative cut-off points to define the classes.

Results: For patients, fatigue, limitations in moderate physical activities, number of exacerbations, dyspnea at rest, and concern about breathing getting worse were the most important drivers of the burden of COPD. Little weight was attached to dyspnoea during exercise, listlessness and limitations with regard to strenuous activities. Respondents from the general public mostly agreed with this. Mild, moderate and severe burden of disease were defined as scores <20, 20-39, >40, respectively. This categorisation was most predictive of healthcare utilisation and annual costs: €1200, €2500 and €9500 per year, respectively.

Conclusion: The ABC tool is an instrument for shared decision making, which scores can be aggregated into an overall score of the experienced burden of disease that is based on the importance that patients themselves assign to the various items. Patients can be grouped into mild, moderate and severe burden of disease and this grouping is predictive of their future healthcare utilization and costs. Hence, at a group level, the ABC Index can be used for monitoring and it may guide contracting between health insurers and healthcare providers.

Keywords: shared decision making; burden of disease; costs; patient preference; copd
