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Lung alert

Updating prognostic parameters in COPD: the updated BODE index and ADO

The BODE index was devised to better reflect the multisystem effects of chronic obstructive pulmonary disease (COPD), allowing for better prognostic estimation than that provided by forced expiratory volume in 1 s (FEV_1) alone. The grading system, based on four parameters—that is, body mass index, airflow obstruction, Medical Research Council (MRC) dyspnoea score and the 6 min walk distance—was verified by population studies.

This study set out to assess whether the BODE index could match the observed mortality in different populations of patients with COPD. The authors assessed the calibration of the BODE index, updated it to reflect any changes in calibration and subsequently developed a simplified index for use in Primary Care.

Two populations of patients with COPD were observed for their 3-year mortality as opposed to those predicted by the BODE index. The populations included patients in the Swiss Barmelweid and the Spanish Phenotype and Course COPD cohorts. In both cohorts they compared the observed 3-year risk of all-cause mortality with the risk predicted by the BODE index.

The authors found a poor calibration of the BODE index, with relative underprediction of the 3-year risk of mortality in the Swiss cohort (3-year predicted mortality risk of 21.7% vs 34.1% observed mortality), and an overprediction of the mortality risk in the Spanish cohort (predicted 16.7% vs 12% observed mortality). They concluded that the BODE index does not reflect all-cause mortality in the different populations. Subsequently they performed further regression analysis and updated the index with a greater emphasis on the 6 min walk distance. They also devised a new predictor of all-cause mortality by the ADO index, using age, airflow obstruction and MRC dyspnoea score.

The authors conclude that the updated BODE and ADO indices provide better prognostic assessment of patients with COPD as measured in the named populations. They hope that the identification of baseline risks through prognostic studies may aid in guideline development, and be followed by targeted therapies to alter the risks.

► Puhan MA, Garcia-Aymerich J, Frey M, *et al*. Expansion of the prognostic assessment of patients with chronic obstructive pulmonary disease: the updated BODE index and the ADO index. Lancet 2009;**374**:704—11.

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