# Validation of Diagnostic Coding of Patients with Chronic Obstructive Pulmonary Disease in The Danish National Indicator Project

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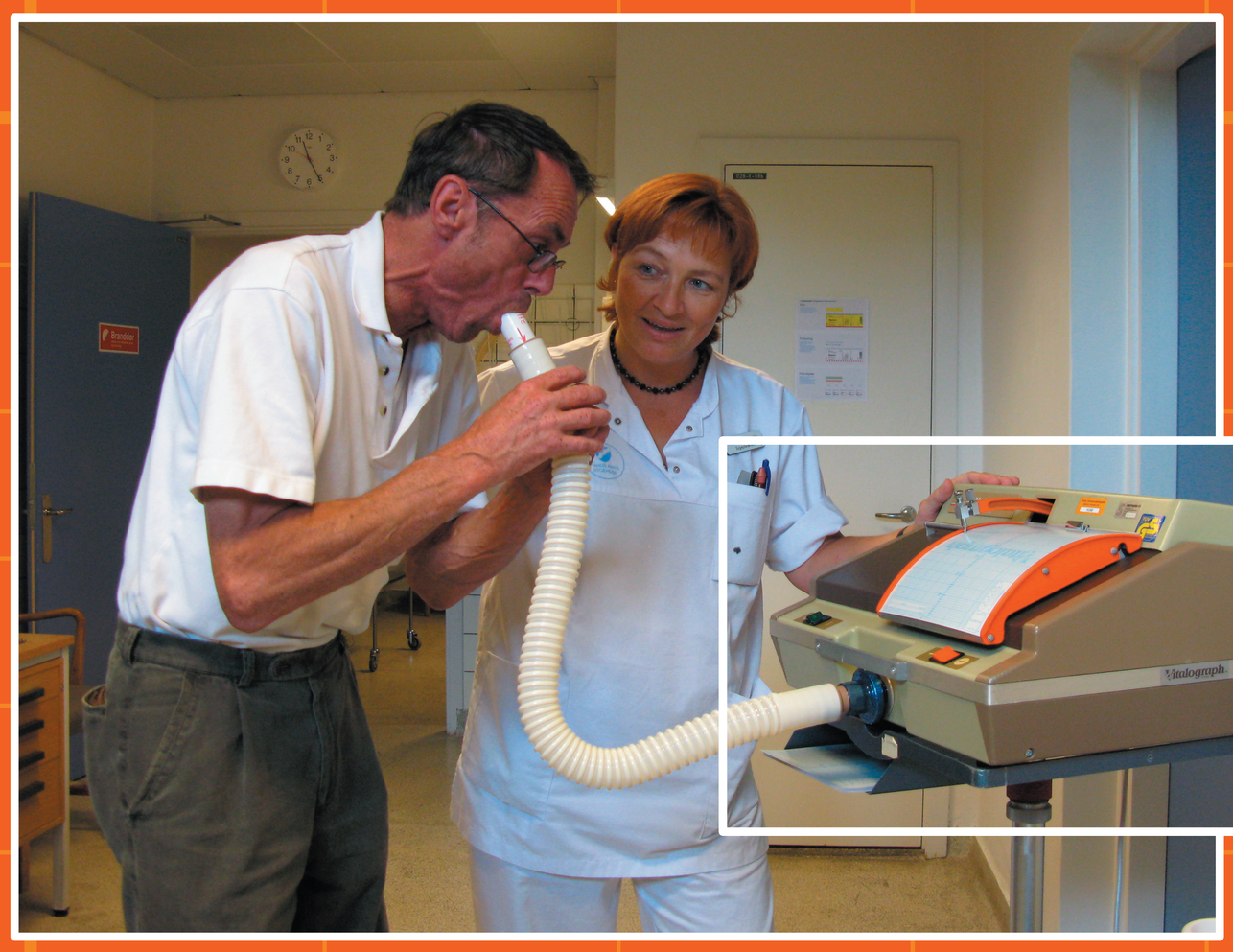


FEV$_1$/FVC

J44.X

J96.X

J13.X-

J18.X

## Objective

To validate diagnostic coding of patients with Chronic Obstructive Pulmonary Disease (COPD) included in The Danish National Indicator Project (DNIP).

## Methods

Nationwide indicator monitoring of the disease specific area COPD was instituted on January 1st 2008 as the 8th disease specific area in DNIP - a mandatory nationwide indicator project for Danish public hospitals. Data consisting of administratively collected diagnostic codes, codes for medical procedures and value codes for test results will be extracted from central registers such as The Danish National Patient Registry and The Danish Civil Registration System. Acutely admitted patients with COPD will be included by a diagnostic code for COPD either as a primary diagnosis or as a secondary diagnosis in combination with a primary diagnosis for pneumonia or acute respiratory failure.

The use of administrative codes for the inclusion of patients, as opposed to a separate, specific collection of data, has eliminated the use of administrative data to assess the completeness of the database for patients with COPD - a usual procedure for several other disease specific areas in DNIP. As an alternative method an assessment of the degree of correct classification of patients by diagnostic codes has been instituted as a standard procedure, thus classifying the diagnostic codes into four groups of respectively true positive, false positive, true negative and false negative diagnoses.

A preliminary assessment of the diagnostic coding was conducted during the COPD test phase from December 2006 to February 2007 at the University Hospital in Aalborg. The chief physician at the department of respiratory medicine conducted a medical journal audit for two groups of patients discharged from the medical centre for a six week period: Group A, who met the inclusion criteria for COPD patients in DNIP and Group B, consisting of patients classified with a diagnostic code for pneumonia or acute respiratory failure. False negative COPD patients were expected to be found in Group B.

All identified patients were evaluated according to the diagnostic criteria for COPD confirmed by spirometry (the FEV$_1$/FVC ratio < 70%).

## Results

A: 29 patients with a code for COPD were discharged from the department of pulmonary medicine. 80% of these patients were given a code for COPD at recoding, 20% were given codes for diseases such as acute bronchitis, acute respiratory failure, pneumonia, unspecified asthma or bronchiectasia. 21 patients with a code for COPD were discharged from other medical departments. 62% were recoded with a code for COPD.

B: 11 patients with a code for pneumonia or acute respiratory failure were discharged from the department of pulmonary medicine. 9% (1 patient) were recoded with a code for COPD. Only one patient in this group was discharged from other medical departments.

## Conclusions

A fairly high rate of patients initially coded with a diagnostic code for COPD, were correctly coded. Lower rates of correctly coded patients may be expected in general medical departments than in a department of pulmonary medicine. Only one patient with COPD did not initially get the code for COPD. However the number of patients in Group B was small.

The method and results from the preliminary assessment of diagnostic codes has been used as a basis for developing a manual for validation of diagnostic coding of acutely admitted patients with COPD in DNIP.

Further results from the assessment of the diagnostic coding within this area in medical departments in all Danish regions will be published at the beginning of 2009.

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