UNDERSTANDING VARIATIONS IN OUTCOME IN COPD: USE OF ROUTINE CLINICAL DATA

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Research question: Can routine observational data contained within the Hampshire Health Record (HHR) be used to characterise patients with COPD, in order to highlight variations in healthcare provision and outcome? Can factors be identified which might explain inequalities, thereby allowing targeted interventions to improve care?

Background: The “NHS Atlas of variation in Healthcare for People with Respiratory disease” http://www.rightcare.nhs.uk/atlas/ has highlighted significant regional variation in COPD healthcare outcomes throughout the UK and demonstrated scope for improvement. We recognise the importance of investigating this in our local population of Hampshire, S. England, where a three-fold difference in death rates has been demonstrated. The Hampshire Health Record (HHR) is an NHS electronic database which holds routine coded clinical data for over one million patients and contains information from both primary and secondary care.

Possible methodology: We plan a retrospective observational study, using individual patient-anonymised data held in the HHR. We will use selected codes to: 1. Define a cohort of patients with a practice coded diagnosis of COPD; 2. Describe this cohort in terms of demography and baseline characteristics (age, sex, ethnicity, deprivation indices, smoking history, FEV₁/FVC ratio, FEV₁ %predicted, BMI); 3. Assess processes of care, in terms of patient monitoring (lung function, dyspnoea, pulse oximetry, cardiovascular risk factors and psychological morbidity), active intervention (inhaler technique review, provision of management plans, smoking cessation support, immunisations, pulmonary rehabilitation), and medication use over the following 2 years; 4. Assess outcomes (exacerbation frequency, hospital admissions and attendances and mortality); 5. Assess co-morbidities (IHD, CCF, stroke, diabetes, CKD, rhinitis, anxiety and/or depression, high or low BMI, osteoporosis, OSA).

Read codes (a coded classification of clinical terms) are used in primary care in the UK to record clinical information electronically. Selected codes from the Read directory will be used to interrogate the primary care data in the HHR as described above. Hospital discharge data will be identified from hospital episode statistics (HES) which use ICD-10 (International Classification of Disease, version 10) codes.

Questions to discuss: 1. Inherent in any observational database study are limitations in the completeness and validity of the data. How can we reduce these?
2. As COPD exacerbations are not always well coded in GP records, what are the best surrogate markers? Current best practice defines exacerbations according to GINA guidelines; can we develop a coding strategy to maximise the reliability by which we detect exacerbations?
3. How can we best develop a directory of code sets?

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Disclosure of Interest: None Declared