

## REFERENCES

1. Navaratnam V, Fleming KM, West J, Smith CJ, Jenkins RG, Fogarty A, Hubbard RB. The rising incidence of idiopathic pulmonary fibrosis in the U. K. *Thorax*. 2011;66:462–7.

### P19 WORRYING TREND OF LABELLING AMBIGUOUS DEATHS AS PNEUMONIA AND POTENTIAL IMPACT ON RESPIRATORY SERVICE IN A DISTRICT GENERAL HOSPITAL

<sup>1</sup>EL Tan, <sup>2</sup>E Davies, <sup>3</sup>S Javed, <sup>2</sup>R Sundar, <sup>2</sup>I Aziz; <sup>1</sup>East Lancashire Hospitals, Blackburn, UK; <sup>2</sup>Respiratory Medicine, Royal Albert Edward Infirmary, Wigan, UK; <sup>3</sup>School of Medicine, University of Manchester, Manchester, UK

10.1136/thoraxjnl-2013-204457.169

**Background** Pneumonia is a common cause of death recorded on death certificates. This data is used by Dr Foster to calculate hospital specific mortality rate (HSMR). However there is a general impression that pneumonia is recorded as the cause of death without confirmation. The British Thoracic Society (BTS) defines pneumonia as ‘symptoms and signs consistent with an acute lower respiratory tract infection associated with new radiographic shadowing for which there is no other explanation’ aspiration pneumonia 20 patients, bronchopneumonia 8 patients, community acquired pneumonia 19 patients, pneumonia 44 patients and hospital acquired pneumonia 20 patients. Out of these 111 patients, 75 (67.6%) patients had radiological changes consistent with a diagnosis of pneumonia on CXR. Out of these 75 patients with radiologically confirmed pneumonia 29 (38.7%) were given incorrect antibiotics as they were treated mainly for sepsis.

**Conclusions** Our findings show a very worrying trend of incorrectly recording pneumonia as cause of death in a third of patients, who were given pneumonia as cause of death. This would increase the HSMR for pneumonia as calculated by Dr Foster. In our opinion pneumonia as a cause of death is an easy option for many medical practitioners.

**Recommendations** We recommend an early input by respiratory physicians for all respiratory admissions to make sure that respiratory illnesses are managed correctly.

## REFERENCES

1. *Thorax* 2009; 64 (Supplement III) : 1–61.

### P20 DOES CASE ACQUISITION BIAS CONTRIBUTE TO HIGHER THAN EXPECTED MORTALITY RATES IN THE BTS NATIONAL AUDIT OF COMMUNITY ACQUIRED PNEUMONIA (CAP)?

C Sharp, M Hameed, BD Patel; Royal Devon and Exeter NHS Foundation Trust, Exeter, United Kingdom

10.1136/thoraxjnl-2013-204457.170

**Background** The BTS CAP audit is the largest national audit of adult CAP management. It relies on acute trusts entering data collected retrospectively from patients’ notes. Cases are selected for entry if they were admitted between 1<sup>st</sup> Dec 2012 and 31<sup>st</sup> Jan 2013 with a diagnosis of CAP confirmed by appropriate radiological changes. Participating institutions are required to submit a minimum of 20 cases. The audit also provides data on mortality. The national data shows a high mortality rate (18.2%) for CAP. However, the mortality data from our own institution was unexpectedly higher at 28.2%.

**Aim** To determine if the high mortality rate from our institution is the result of selection bias.

**Methods** We compared the outcomes of 39 audit cases entered from our institution, a large teaching hospital serving a semi-rural population, with all other cases of CAP admitted over the same period not entered into the audit. Proportions were compared using chi-square tests and continuous variables using Kruskal-Wallis test.

**Results** During the two month audit period, 124 cases of CAP were identified of whom 39 (31.5%) were entered into the audit. There was no significant difference in age between those entered (77.1 yrs  $\pm$  SD 11.0) and those not entered (70.1 yrs  $\pm$  18.5). However the inpatient mortality rate was significantly higher in those entered into the audit than those who were not (28.2% Vs 10.6%,  $p = 0.01$ ).

**Conclusions** These results show that selection bias accounts for the apparently high mortality rates. Although the notes of all patients admitted with CAP were requested for the audit, on reviewing the methods used by the audit department, it is apparent that patients whose notes are most readily available are collected first for audit. Deceased patients’ notes are more easily accessed by the audit team; since the national audit requires only a proportion of patients to be entered, this group are over-represented. If other institutions have similar practices, the national audit will over-estimate mortality from CAP. Case acquisition bias could be reduced by collecting cases prospectively, or by entering all cases of CAP over a shorter predefined time period.

### P21 THE RELATIONSHIP BETWEEN EMPLOYMENT STATUS, WORK PRODUCTIVITY AND QUALITY OF LIFE AMONG PATIENTS WITH COPD: CROSS-SECTIONAL ANALYSIS OF THE BIRMINGHAM COPD COHORT

<sup>1</sup>K Kalirai, <sup>2</sup>P Adab, <sup>2</sup>R Jordan, <sup>2</sup>D Fitzmaurice, <sup>1</sup>J Ayres; <sup>1</sup>Institute of Occupational and Environmental Medicine, The University of Birmingham, Birmingham, England; <sup>2</sup>Public Health, Epidemiology & Biostatistics, The University of Birmingham, Birmingham, England

10.1136/thoraxjnl-2013-204457.171

**Introduction** Health related quality of life (HRQoL) tends to be lower among COPD patients, as a result of associated symptoms, comorbidities and the impact of disease on daily life. However, little is known about the association between employment status and HRQoL among COPD patients.

**Aims** We examined the relationships between HRQoL and employment status and occupational performance among patients with COPD.

**Methods** 2000 patients with COPD from primary care are being recruited into the Birmingham COPD cohort study. In addition to clinical data, employment status, work performance and HRQoL were assessed. Work performance was measured using the SPS-6 presenteeism questionnaire. HRQoL was measured using the St George’s respiratory questionnaire (SGRQ-C). Interim baseline data was used to assess associations between HRQoL and employment status and HRQoL and occupational performance. Multivariate analyses were used to adjust for potential confounders. Model 1 adjusted for age, sex and smoking status. Model 2 additionally adjusted for disease severity (GOLD stage), number of co-morbidities and MRC dyspnoea score.

**Results** Of the 1094 patients recruited, 14.6% ( $n = 160$ ) were in work. **Employment status:** Model 1 showed that poorer quality of life was associated with lower likelihood of being in employment (OR = 0.98, 95% CI 0.96–0.99), but the effect