

## Work-related respiratory disease

## P1 QUALITY OF LIFE RELATED TO COPD AND OCCUPATIONAL EXPOSURES

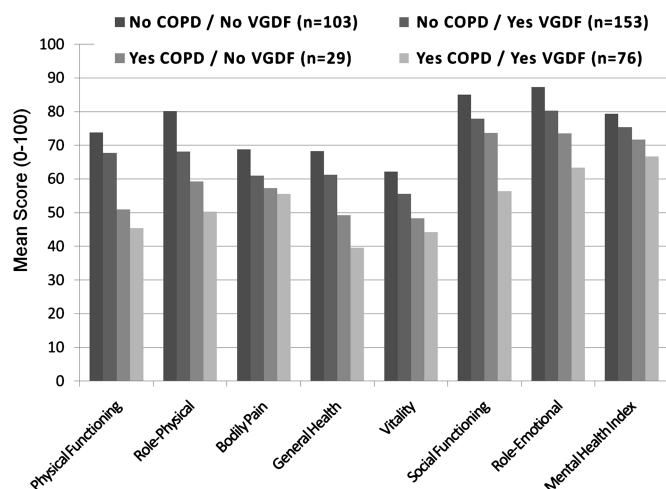
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**Introduction** COPD is associated with a considerable degree of morbidity and mortality and has been shown to adversely affect quality of life. One of the aims of a large epidemiological study of COPD and occupation in Sheffield was to evaluate quality of life. Having previously presented data from our initial survey using the EQ-5D tool and self-reported COPD<sup>1</sup>, we now present data from the follow up phase of the population based study using the more detailed quality of life estimate SF-36v2 and COPD defined by spirometry.

**Methods** A random population sample of 4000 Sheffield residents aged over 55 years was approached for study in 2007, along with a supplemental sample of 209 people with likely COPD recruited from a hospital physiology department. A detailed questionnaire recorded demographics, respiratory symptoms and diagnoses, smoking and occupational exposures. A proportion were re-visited in 2009–2010 for further spirometry and quality of life measure using the SF-36v2, which consists of 36 questions, divided into 8 domains, scores being converted to a scale from 0 to 100, the higher score indicating better health.

**Results** 549 people participated in the follow up phase, of whom 361 completed the SF-36v2. Abstract P1 Figure 1 shows mean scores for each of four different categories relating to COPD (defined by GOLD level 1 spirometry) and ever exposure to vapours, gases, dust and fumes (VGDF) in the workplace. In all domains, the group with airways obstruction has lower mean values than those without, and those who also report exposure to VGDF at work have further reductions ( $p < 0.05$ ). Of the 103 people in this group who have airways obstruction, those who also self-report a diagnosis of COPD ( $n=49$ ) have significantly worse ( $p < 0.05$ ) quality of life than those who have no self-reported diagnosis.



Abstract P1 Figure 1

**Conclusions** Those with GOLD 1 or greater COPD have an adverse quality of life as compared to those without airways obstruction, differences in scores being greater for the physical rather than emotional domains. Occupational exposure to VGDF also appears to adversely affect quality of life estimates.

## REFERENCE

1. Darby A, et al. Quality of life estimates in the Sheffield COPD study. *Poster 1094 ERS* 2009.

## P2 OUTBREAK CASE DEFINITIONS FOR EXTRINSIC ALLERGIC ALVEOLITIS DUE TO METALWORKING FLUIDS

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**Introduction** In 2003, a large outbreak of occupational lung disease (OLD) occurred in the Powetrain plant in Birmingham, which included 21 workers who met the case definition for extrinsic allergic alveolitis (EAA). The aim of this study was to assess the performance of the case definition used during this and other outbreaks, against best available clinical diagnosis.

**Methods** All available hospital clinical data (including follow-up) for 37 workers with a documented clinical suspicion of EAA during the outbreak investigation was reviewed by a panel meeting of 5 UK OLD specialists. A definite clinical EAA case was accepted if at least four of the five experts agreed. This opinion was compared with a range of case definitions previously used during UK and US outbreaks.

**Results** A definite clinical diagnosis of EAA was accepted for 14 of the 37 workers. The performance (level of agreement, sensitivity and specificity) of different EAA case definitions vs the specialist clinical opinion is shown in Abstract P2 Table 1.

Abstract P2 Table 1

Case definition	Cohen kappa	Sensitivity	Specificity
Robertson 2007	0.80	100%	70%
Gupta 2006	0.68	36%	96%
Dangman 2002	0.78	79%	83%
Weiss 2002	0.49	7%	91%
Fox 1999	0.83	93%	78%
Zacharisen 1998	0.44	79%	35%

**Discussion** The EAA case definition used in the Powertrain outbreak (Robertson 2007) showed substantial agreement with expert clinical opinion, correctly classifying 30/37 workers, without missing any of the definite clinical EAA cases. The Fox and Dangman criteria also performed well, correctly classifying a similar proportion of workers, but missing 1 and 3 of the definite clinical EAA cases respectively.

## P3 COPD CAUSATION; AN ASSESSMENT OF AGREEMENT BETWEEN EXPERT CLINICAL RATERS

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**Introduction and Objectives** Epidemiological studies consistently find that up to 15% of COPD is attributable to occupational exposures.