Objective To investigate the causes and burden of work-related COPD in the UK through the use and extension of UK Biobank cohort information on occupational exposure.
Methods UK Biobank is a population-based cohort of over 500,000 people aged between 40–69 years and recruited in 2006–2010. Baseline measurements of spirometric lung function and lifetime smoking history have been collected and are being analysed with information on current employment status translated into standard occupational codes (SOC 2000). An enhanced web-based occupational module based on the hierarchical structure of SOC 2000 will be sent to all participants in 2013 to collect their life-time occupational histories. Subsidiary questions concerning industries, jobs and exposures related to COPD will be included, as well as questions on shift patterns and hours worked. We are developing a general Job Exposure Matrix (JEM) for COPD for application to the Biobank data. The JEM involves allocation of exposure for different airborne pollutant types for each 4 digit SOC code. Results from systematic review and evaluation of the literature on occupational COPD and the currently available disease-specific JEMs are being used to identify key jobs, exposures and occupational burden of COPD.
Results About 40% of participants have never smoked. At baseline, only 8352 (1.67%) reported that they had been given a diagnosis of chronic bronchitis or emphysema by a doctor. Spirometry data are available for approximately 324000 participants. Preliminary analysis indicates that 30214 men and 25608 women have airflow obstruction (FEV1/FVC <0.7). Of these, 39% of the women reported never smoking in contrast to about 3% of the men.
Conclusions This project will provide estimates of the burden of COPD atributable to lifetime occupational exposure in the UK and facilitate the development of a long-term strategy for the prevention of occupational COPD.

80 CROSS-SECTIONAL STUDY ON RESPIRATORY SYMPTOMS IN WORKERS EXPOSED TO METALWORKING FLUID AEROSOLS

Brisman, Olin, Andersson, Hammar, Dahlman-Höglund. *Sahlgrenska University Hospital & Academy, Gothenburg, Sweden*

10.1136/oemed-2013-101717.80

Objectives To survey which respiratory symptoms are more prevalent in workers exposed to metalworking fluids (MWF) in machine shops compared with referents. Workers with common symptoms from the lower airways will be invited to clinical examinations.
Methods Workers in two large companies answered questionnaires on respiratory symptoms, atopy, working conditions and smoking. Most questions were used in a previous Swedish study of MWF exposed workers (Lillienberg *et al*, 2010). In each company there were workers exposed to MWF and referents from similar machine shops but not exposed to MWFs. There were 480 MWF exposed workers and 142 non-exposed referents answering the questionnaire. The response rate was 83.6%. 88.7% of the respondents were male. Prevalence of different symptoms and atopy were compared between exposed and referents by chi-square tests or Fisher's exact test.
Results In general, there were higher prevalences of symptoms in exposed workers. The prevalence of dry cough was 37.7% in exposed workers vs. 27.5% in referents (p = 0.0006). Prevalence of often occurring self-reported symptoms such as cough, dyspnoea or wheeze when exposed to MWF was 6.2%, and occasional such symptoms was reported by 22.6% of MWF exposed respondents. There were no significant difference in atopy or never smokers between exposed and referents. Prevalences of current symptoms from eyes, nose and lower airways were higher in exposed workers than in referents and similar as in the previous Swedish study.
Conclusions Metal workers exposed to MWFs reported more respiratory and eye symptoms than blue collar referents from the same companies. In particular, dry cough was significantly more common. MWF exposed workers and referents with dry cough or asthma as well as exposed workers and referents without symptoms will be invited for clinical examinations.

81 HOW RELIABLE IS A 'YES' AFTER TEN YEARS?

B E Andersson, Holm, Nilsson, Torén. *Sahlgrenska University Hospital, Gothenburg, Sweden*

10.1136/oemed-2013-101717.81

Objectives When doing prospective incidence studies of e.g. asthma in the general population using questionnaires, they are often repeated with an interval of five or ten years. We commonly use questions like "Have you ever had asthma?" Reliability usually is studied as test-retest reliability assuming the same conditions. But how reliable is an affirmative response of a question of ever having had a condition after ten years?
Methods In a study of incidence and risk factors of respiratory diseases a random sample of 20000 individuals in a county in Western Sweden born between 1943 and 1973 was sent a questionnaire in 1993. It comprised items about airway symptoms and smoking. 15813 subjects answered (79%) and at follow-up in 2003 11463 of them (72%) answered the questionnaire. The proportion of a yes answer on the second occasion, conditional on having answered yes on the first occasion, with confidence intervals (95% CI) was calculated by gender and baseline age groups (20–30 years, 31–40 years, 41–50 years).
Results The proportion reporting physician-diagnosed asthma 2003 when doing so 1993 was 84.1% (418/497, 95% CI 80.6–87.2). Corresponding figures for reporting "ever had asthma" was 84.2% (534/634, 95% CI 81.2–87.0), "ever had wheeze since the age of 15" was 55.3% (1109/2005, 95% CI 53.1–57.5), ever smoking was 93.9% (5161/5496, 95% CI 93.2–94.5). The proportion reporting physician-diagnosed asthma by gender: women 85.7% (95% CI 81.1–89.6) and men 82.0% (95% CI 76.2–86.9).
Conclusion In this general population study the proportion of an affirmative response of a question of ever having had a condition after ten years, conditional on having answered yes on the first occasion, differed depending of question but not due to gender or age. Ever smoking and asthma were highly reliable in this aspect. There was no difference between reported asthma and physician-diagnosed asthma.

82 HIGH RESOLUTION COMPUTED TOMOGRAPHY OF THE LUNGS OF ASPHALT WORKERS

[1]G Randem, [1]Aaløkken, [2]Ulvestad. *[1]Oslo University Hospital, Oslo, Norway; [2]Statens Arbeidsmiljøinstitutt, Oslo, Norway*

10.1136/oemed-2013-101717.82