Abstract Group: 6.2. Occupational and Environmental Health

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Title: Job exposure matrix development for SOC 2000 occupational codes

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Body: Introduction: Workplace exposures cause a significant proportion of Chronic Obstructive Pulmonary Disease (COPD). Population based studies can improve the understanding of this causal relationship, but are limited in their use by difficulties in accurately defining relevant inhaled workplace exposures. Methods: A SOC 2000 job exposure matrix (JEM) was developed. For each of the 359 four digit codes, the likelihood of exposures to gases, vapours, fumes, fibres, dusts, mists and allergens (GVFFDMA) was assigned as either exposed or unexposed. Four expert raters independently rated exposures and gained consensus over four rounds of exposure classification. Results: 194 (54%) of the SOC codes were assigned as exposed to at least one of the pre-defined categories (GVFFDMA), and 165 codes (46% of the total) were assigned as not exposed. Sixty five codes (18.1%) were assigned as exposed to gases, 83 (23.1%) to vapours, 98 (27.3%) to fumes, 29 (8.1%) to fibres, 153 (42.6%) to dusts and 61 (17.0%) to mists. 102 (28.4%) were assigned as exposed to an agent thought to cause asthma. Combinations of exposures within a code were common; for example, 10% of codes were assigned a single exposure category, whilst 13.9% were assigned two, and 11.7% assigned three. Discussion; A JEM for use with SOC 2000 codes has been developed, using a set of a priori defined rules. This will assist attribution of possible harmful workplace exposures in future population-based studies where SOC codes are known. Given that exposure was attributed irrespective of its likelihood to cause COPD, this JEM could also be applied to studies to assess risks of other respiratory diseases, including asthma. Further validation work is in progress.