Testing the utility of categorisation of jobs in a community-based case-control study

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Objectives Expert assessment of occupational exposure is useful when measured exposure data are not available. However, the process is inefficient in community-based studies with low exposure prevalence. We aimed to determine if formally categorising the jobs before expert review could improve efficiency.

Methods OccIDEAS is an expert exposure assessment system that uses job specific modules (JSMs). A JSM is a set of questions given to people in a particular job asking about the determinants of exposure to agents of interest (in this case, solvents). The answers to the questions trigger automatic exposure assessments based on preprogrammed rules. There are four categories of jobs: (1) Jobs unlikely to be exposed to solvents. (2) Jobs for which a JSM exists and automatic assessments are obtained (3) Jobs for which a JSM exists but is not administered to the subject (4) Jobs for which exposure to solvents might occur but no JSM exists Two experts assessed solvent exposure in 1961 jobs. Agreement between the two raters was compared for the four groups.

Results The majority of jobs (75%) were category 1 and very few of these jobs were reclassified as exposed by the raters. For category 2 jobs (17.9% of total) raters tended to agree with automatic assessments of “unexposed” or “probably exposed” but not with automatic assessments of “possible exposure”. For category 2 or 3 jobs, the level of disagreement between the raters tended to be high.

Conclusions Formal categorisation of jobs can improve the efficiency of the expert assessment process.