Assessment of Occupational Exposure in an Epidemiologic Study of COPD

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When evaluating the risk of COPD associated with occupational exposure in the general population, evaluation of occupational exposure is often done through the use of a Job Exposure Matrix (JEM).

The aim of our study is to describe the methodology used to evaluate lifetime occupational exposure in a set of COPD 391 cases and 359 controls studied for an association between COPD and occupational exposure. The methodology involved assignment of an index of exposure to specific categories of potential environmental hazards occurring in the workplace, and estimation of the occupational exposure over the working lifetime of an individual. The specific hazard categories were mineral dust, organic dust, solvents, diesel, irritants, sensitizers, metal dusts/fumes and environmental tobacco smoke (ETS). The assignment was based on the best available information (including self-report) and taking into account potential time trends in exposure level.

The results from the study of COPD show that an associations between COPD status and occupational exposure was identified for exposure to irritant gases and vapors (OR=1.7, 95% CI = 1.2-2.4) and diesel exhaust (1.7, 1.1-2.7). Irritant Gas/Vapor was the most common exposure type for the top six Occupational codes (Office, Sales, Production-machine, Management, Food and drink workers, and Computer workers). Organic dust was most common in Agriculture, Wood production, and Textile production. Organic solvents were common in Transportation maintenance, Maintenance and repair, and Service station attendants. Diesel was commonly coded in Transportation, Material moving workers, Mining, and Logging. Sensitizers were frequently coded for Production-machine operators, Personal care and services (includes beauticians), and Agriculture. Kappa statistics indicated high agreement between the industrial hygienists who did the scoring. The agreements in this study ranged from "moderate" (46% agreement) to "almost perfect" (81% agreement).

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GRADUATE STUDENT

POSTER SESSION ABSTRACTS

REACHING NEW HEIGHTS

Poster Session 401, Monday, May 15
10:00 a.m.–Noon
Poster Session 402, Monday, May 15
2:00 p.m.–4:00 p.m.
Poster Session 403, Tuesday, May 16
10:00 a.m.–Noon
Poster Session 404, Tuesday, May 16
2:00 p.m.–4:00 p.m.
Poster Session 405 (Graduate Students), Wednesday, May 17
10:00 a.m.–Noon

Graduate Student Poster Session Coordinator:
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