Conclusion Our findings suggest that welding may increase the risk of laryngeal cancer. The evidence is weaker for oral and hypopharyngeal cancer, and we found no evidence of an association with oropharyngeal cancer.

Oral Presentation

Exposure Assessment

0388 POULTRY WORKER TASKS ASSOCIATED WITH CAMPYLOBACTERIOSIS IN MINNESOTA, 2012–2016

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Background Campylobacteriosis is typically considered a food-borne disease. Poultry workers, however, may be at higher risk due to their close contact with the primary reservoir of *Campylobacter*. The objective of this study was to evaluate whether occupational poultry exposures are associated with campylobacteriosis in Minnesota.

Methods *Campylobacter*, *Salmonella*, *Cryptosporidium*, Shiga toxin-producing *E. coli*, and *Yersinia* infections are reportable to the Minnesota Department of Health. Cases reported during 2012–2016 were interviewed with a standard questionnaire to ascertain potential agriculture exposures. Using the population exposed to agricultural animals, we conducted a case-case comparison study comparing *Campylobacter* infections (cases) to *Cryptosporidium*, Shiga toxin-producing *E. coli*, and *Yersinia* infections (control-cases). These control pathogens were selected because poultry are not their primary reservoir, and thus infections likely came from non-poultry sources.

We determined whether campylobacteriosis was associated with working with poultry, and then if so, with what specific tasks. Odds ratios (OR) with 95% confidence intervals (CI) were calculated as measures of association.

Results Among all animal agriculture workers exposed (504 campylobacteriosis cases and 228 control-cases), campylobacteriosis was associated with working with poultry (OR=2.0; 95% CI: 1.5–2.8). Among poultry workers (276 cases and 86 control-cases), tasks associated with campylobacteriosis included slaughtering (OR=7.4; 95% CI: 1.0–55.4), removing dead birds (OR=7.5; 95% CI: 1.8–31.8), handling manure (OR=4.0; 95% CI: 1.2–13.4), and handling birds' water (OR=2.1; 95% CI: 1.2–3.5).

Conclusions These results support the hypothesis that occupational exposure to poultry increases the risk of campylobacteriosis, and certain poultry-related tasks pose a higher risk of infection than others.

Oral Presentation

Shift Work

0391 ARE WOMEN DOING SHIFT WORK IN PAPER MILLS AT INCREASED RISK FOR MYOCARDIAL INFARCTION?

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Introduction Nurses with long durations of rotating night shifts appear to be at increased risk for coronary heart disease. But industrial shift work among women has not been well-studied.

Methods Women employed more than one year from cohorts of soft paper mills (n=3354) and pulp and paper mills (n=2278) were evaluated in this study. Mill-specific job exposure matrices for shift work and noise exposure were developed at department and job levels. Every worked year was classified for shift work as probable, possible (including shift with no nights) or not likely. Similarly, noise was classified into seven 5 dBA bins <75 dBA to >100 dBA. Here we present the cohort mortality from myocardial infarction for 1969–2013 as standardised mortality ratios (SMRs) with 95% confidence intervals (CI) compared to the general population in Sweden.

Results Fatal myocardial infarctions (n=186) were increased in the cohort of women (SMR 123, 95% CI 106–142). Those classified as probable shift work (n=2399) had an SMR of 129 (98–166) and possible shift work (n=2060) had an SMR of 118 (93–146). Women with >10 years exposure to noise >90 dBA (n=602) had an SMR of 142 (103–192). SMRs declined with lower noise and shorter duration of noise, similar for both types of paper mills.

Conclusions Shift working women in paper mills have an increased mortality from myocardial infarction, but the effect of shift work is difficult to separate from noise exposure. Probable shift work and shorter durations of noise exposure >85 dBA were still associated with elevated SMRs.

Invited

Other

0392 INVITED KEYNOTE: FAST FORWARD EXPOSURE ASSESSMENT: UNDERSTANDING PRECARIY AS A WORK-RELATED RISK IN THE NEW ECONOMY

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