

## Oral Presentation

### Reproductive Effects

#### 0262 RISK OF MISCARRIAGE IN ASSOCIATION TO WORK AT NIGHT: A PROSPECTIVE PAYROLL DATA STUDY

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**The aim** An increased risk of miscarriage among fixed night workers has been reported, but exposure assessments have primarily been self-reported and often reported retrospectively. The aim of the study was to investigate, in a follow-up study with detailed data on exposure, whether working at night carries an increased risk of miscarriage.

**Design** The study population included all female public service employees in the five Danish administrative Regions, which were mainly hospital employees, with at least one pregnancy from 2007 through 2013 (n=21.920). Data on working time was extracted from the Danish Working Hour Database (DWHD), which holds detailed information on exact daily working hours. Night shift was defined as working at least three hours between 00:00 and 05:00. Information on miscarriages and births was obtained from The Danish National Patient Registry and The Medical Birth Registry. Risk of miscarriage was analysed according to the number of night shifts during the first trimester, accounting for maternal age, parity, socio-economic class, maternal smoking, BMI and induced abortions.

**Results** In this population 11.8% had had an abortion (n=2583). Compared to dayshift workers, the adjusted OR of miscarriage in women working 1–6, 7–12, 13–18, and 19+ nights during the first trimester of pregnancy was 0.93 (95% CI 0.78–1.11), 0.90 (95% CI 0.73–1.10), 0.66 (95% CI 0.47–0.94) and 0.96 (95% CI 0.64–1.45), respectively. Similar findings were found in analyses addressing night shifts during each month.

**Conclusion** We found no increased risk of miscarriage in night workers during the first trimester of pregnancy.

## Oral Presentation

### Risk Assessment

#### 0263 DETERMINANTS OF OCCUPATIONAL DISEASES IN THE NETHERLANDS: RISKS AT THE INDIVIDUAL AND THE POPULATION LEVEL

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**Objective** To identify the main determinants of occupational diseases at both the individual and the population level.

**Methods** This study used data from the Dutch National Working Conditions Survey (NWCS 2014; occupational disease confirmed by a doctor, self-reported, employees).

Multivariate regression analyses were performed to assess the independent association at the individual level (OR) between each determinant and the presence of at least one occupational disease. Additionally, the Population Attributable Risk (PAR) was calculated for each determinant in order to assess the risk at the population level as well.

**Results** The top three determinants that may be influenced and also contributed most to *musculoskeletal* occupational diseases, were the same at the individual and the population level: ‘Repetitive movements’ (PAR=40.0%; OR=2.25), ‘Working in uncomfortable positions/bad posture’ (PAR=17.7%; OR=1.62), and ‘High job demands’ (PAR=17.6%; OR=1.57).

Determinants that contributed most to *psychological* occupational diseases were also the same on the individual and population level: ‘Low engagement’ (PAR=33.6%; OR=2.27), ‘Conflict with supervisor’ (PAR=16.7%; OR=1.51), and ‘High emotional demands’ (PAR=14.4%; OR=2.85).

**Conclusion** These determinants may be influenced through education, measures and/or policies at the workplace or on higher levels, in order to decrease the prevalence of occupational diseases in the working population.

## Poster Presentation

### Exposure Assessment

#### 0264 PROBE: HAZARDOUS CHEMICAL PRODUCTS REGISTER FOR OCCUPATIONAL USE IN BELGIUM

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During their job, workers are exposed to a wide variety of working conditions including chemical substances that are potentially detrimental to employees’ health. Today, Belgian data on occupational exposure to dangerous chemicals are collected by Occupational Health Services (OHS) merely for the purpose of assuring the appropriate health screening. This makes these data of little use for epidemiological research and exposure surveillance on one hand and for policy development by competent authorities on the other hand. The PROBE (Hazardous chemical Products Register for Occupational use in Belgium) study is set up to investigate the exposure of Belgian workers to dangerous chemical products, including type, duration and frequency of exposure. PROBE consists of a systematic collection and analysis of occupational chemical exposure data. A trained, motivated, and representative sample of occupational physicians from both internal and external OHS will