

livestock in both directions (positive with cattle breeding and inverse with poultry), although based on small numbers for some activities.

## Burden of Disease

### RF-184 ESTIMATING THE BURDEN OF CARDIOVASCULAR DISEASES AND DEPRESSION ATTRIBUTABLE TO PSYCHOSOCIAL WORK EXPOSURES IN 28 EUROPEAN UNION COUNTRIES

<sup>1</sup>Hélène Sultan-Taieb, Tania Villeneuve, Jean-François Chastang, Isabelle Niedhammer.  
<sup>1</sup>Université du Québec à Montréal (UQAM), Canada

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**Objectives** This study aimed to estimate the annual burden of cardiovascular diseases and depression attributable to psychosocial work exposures in 28 EU countries (EU28) in 2015.

**Methods** This study was based on up-to-date estimates of the fractions of cardiovascular diseases and depression attributable to five psychosocial work exposures in EU28: job strain, effort-reward imbalance, job insecurity, long working hours, and workplace bullying. The outcomes included: coronary/ischemic heart diseases (CHD), stroke, atrial fibrillation, peripheral artery disease, and depression. Burden indicators were prevalent cases, deaths, Years of Life Lost, Years of Life Lost due to Disability, and Disability Adjusted Life Years (DALY). Health outcome data were extracted from the Global Health Data Exchange database, provided by the Institute for Health Metrics and Evaluation. To take into account differences in population sizes between countries, we calculated the prevalence rate, the mortality rate, and the DALY rate per 100,000 workers for each health outcome attributable to each exposure and tested the differences between countries using the Wald test. Results were plotted on maps.

**Results** The overall burden of CHD attributable to all studied psychosocial work exposures in EU28 was 181,870 to 415,368 prevalent cases, 3,759 to 8,586 deaths, and 129,280 to 295,259 DALYs in 2015. The overall burden of depression was 1,715,026 to 3,645,262 prevalent cases, 8,471 to 18,005 deaths, and 651,665 to 1,385,104 DALYs. Differences between countries for DALY rates per 100,000 workers were significant for all exposures and health outcomes. The highest burdens in DALY rate corresponded to depression attributable to job strain (680 DALY rate per 100,000 workers in Lithuania, 418 in Hungary) and to depression attributable to workplace bullying (371 in France).

**Conclusion** Such results are necessary as decision tools for decision-makers and policy makers (governments, employers, trade unions) when defining public health priorities and preventive strategies in European countries regarding work stress prevention.

### RF-223 CAUSE-SPECIFIC MORTALITY AND SITE-SPECIFIC CANCER INCIDENCE AMONG GREENSPACE WORKERS IN THE AGRICAN COHORT STUDY.

<sup>1</sup>Lucie De Graaf, Madar Talibov, Mathilde Boulanger, Mathilde Bureau, Elsa Robelot, Pierre Lebaillly, Isabelle Baldi. <sup>1</sup>INSERM 1219 – Bordeaux Population Health, France

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**Introduction** Workers in the greenspace industry are exposed to a range of occupational hazards including pesticides. Occupational exposure to pesticides and their health effects have been mainly studied among farmers while data on greenspace workers remain scarce. Exposures in greenspaces are not similar to those in farming: there are differences in applied substances, equipment, application scenario, general environment etc. Studying the impact of pesticides highly used in this specific population provides relevant data on some specific substances like total herbicides (glyphosate, paraquat, etc.).

**Objectives** To analyse the causes of death and the incidence of main cancers among greenspace workers.

**Methods** Within the AGRICAN cohort - that enrolled more than 181,000 workers affiliated to the health insurance for agriculture in 2005–2007 in 11 French areas – we defined a sub-cohort of 6,247 workers from the greenspace industry. We run survival analyses (Cox-proportional hazards models) on main causes of death and on cancer incidence from enrolment to the end of 2015. Comparisons with farmers and non-agricultural workers have been performed.

**Results** Overall mortality among greenspace workers was comparable to that of farmers and non-agricultural workers. However, greenspace workers' overall cancer incidence (n=446) was higher than among farmers (HR=1.15 [1.04–1.27]). Compared to farmers, increased risks have been found in men for: skin melanoma (HR=2.15 [1.33–3.47]), prostate (HR=1.21 [1.02–1.44]), testicular (HR=3.98 [1.50–10.58]), and thyroid (HR=2.84 [1.60–6.41]) cancers; and in women for breast cancer (HR=1.71 [1.17–2.50]). Elevated risks were also found for cancers of the larynx and bladder and sarcomas. These associations have been found among pesticide applicators as well.

**Conclusion** The differences in cancer incidence between greenspace workers and farmers could suggest the impacts of occupational risks specific to this population. Additional research is underway to better characterize their exposures and will be used in further analyses.

### RF-255 OCCUPATIONAL FACTORS RELATED TO MUSCULOSKELETAL DISEASES (MSD) AMONG NURSING AIDES IN NURSING HOME IN TAIWAN

<sup>1</sup>Isabella Yu-Ju Hung, Yue Leon Guo, Kuan-Han Lin, Judith Shu-Chu Shiao. <sup>1</sup>Chung Hua University of Medical Technology, Taiwan

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**Introduction** The percentage of elderly citizens is continually rising due to improved living conditions and health care system around the world. Nursing aides (NAs) were reported at high risk of musculoskeletal disorders (MSDs) in several studies.

**Objective** The aim of the study was to investigate the association between occupational risk factors in the workplace and MSD among NAs in nursing home.

**Methods** A cross-sectional study was conducted among female NAs from nursing home. A self-administered questionnaire, including Nordic questionnaire was used to collect data. The association between work-related risk factors and MSDs were analysed by multiple logistic regression.

**Results** A total of 329 nursing aides were included in the analysis of the study. The average age and tenure of NAs