

**Objectives** The OSH Evidence group consists of experts coming from Institutes of the partnership for European Research in Occupational Safety and Health (PEROSH). Our main objective is to facilitate knowledge transfer from scientific research into policy making by means of systematic reviews. In this project we developed a priority list of topics for reviews which should be in line with the major trends and research challenges in OSH.

**Methods** We took the PEROSH paper on research challenges as a starting point. In this paper seven main research areas were identified by consultation of the member institutes that are significantly prevalent and innovative in terms of preventing ill health and occupational accidents. We aimed to translate the research needs in answerable research questions. We formulated criteria to decide if this specific question should be answered with a systematic review or with a scoping review. For systematic reviews, we phrased clear answerable questions according to a predefined 'PICO' format: P = participants, I = intervention/exposure, C = comparison/control, O = outcome. For scoping reviews, we described the target population, the intervention or exposure (s) and the intended results of the scoping reviews.

**Results** The main research challenges identified by PEROSH were: 'Sustainable employability', 'Disability prevention', 'Psychosocial well-being', 'Multi-factorial genesis of musculoskeletal disorders', 'New technologies', 'Occupational risks of nano-materials', and 'Safety culture'. The project resulted in two lists for each research topic, one containing priorities for systematic reviews and one for scoping reviews. For example, a systematic review is needed for the research question "Is physically demanding work a risk factor for early retirement?", while a scoping review is needed for the research question "Which interventions are available to prolong working life?".

**Conclusions** Translating research priorities into questions that can be answered with systematic reviews and scoping reviews is feasible. The exercise helps in setting priorities for where reviews are needed.

## Session: 29. Health in health care

### 372 NATURAL RUBBER LATEX AEROALLERGEN EXPOSURE AND ALLERGY AMONG FEMALE NURSES IN GOVERNMENTAL HOSPITALS, THAILAND

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**Objectives** The aim of the study was to determine the prevalence of latex allergy in nurses and to determine occupational risk factors.

**Methods** A cross-sectional study was conducted in 899 female nurses from three Thai hospitals with information on working conditions, lifestyle, ill-health, and symptoms related to latex use, collected by a self-reported questionnaire. Pulmonary function was determined by spirometry. Latex sensitisation was determined by using a solid-phase enzyme-labelled fluoroenzymeimmunoassay for anti-latex IgE antibodies. Inhalable aerosol levels were measured in different wards using stationary air sampling and latex aeroallergen levels in these samples were measured using a Pharmacia CAP competitive-inhibition immunoassay.

**Results** Health effects-related to latex glove use were reported by 17.5% (157/899) of the nurses with the majority reporting dermal symptoms (84.1%, 132/157) and to a lesser extent

respiratory symptoms (27.4%, 43/157), respectively. The prevalence of latex sensitisation was 4.4% (16/363). Occupational factors associated with dermal symptoms included working in operating theatres (OR 2.5, 95% CI 1.5 - 4.2), wearing > 15 pairs of latex gloves per day (OR 2.1, 95% CI 1.3 - 3.4), and washing hands with chlorhexidine (OR 2.1, 95% CI 1.2 - 3.5). Latex sensitisation was associated with respiratory symptoms (OR 3.8, 95% CI 1.0 - 14.5) and with decreased FEF<sub>25-75%</sub> predicted (-12.22, 95% CI -23.6 to -0.88). The concentration of NRL aeroallergens in hospital workplaces ranged from 6.9 to 12.4 ng/m<sup>3</sup>.

**Conclusions** Use of powdered latex gloves was associated with increasing risk of developing glove-related symptoms, particularly dermal symptoms in nurses. Operating theatre nurses were a high risk group for developing glove-related dermal symptoms. Use of alternative gloves should be considered in Thai-hospitals, while also the risk associated with the use of chlorhexidine containing sanitisers should be examined further.

### 373 BURNOUT, A SUBSTANTIAL PROBLEM IN HOSPITAL PHYSICIANS. A MULTICENTRE STUDY ON ITS PREVALENCE, DETERMINANTS AND CONSEQUENCES IN 37 BELGIAN HOSPITALS

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**Objectives** Previous research revealed burnout in one third of the Belgian critical care physicians. Burnout leads to absenteeism, affects quality and safety of care, while work-engagement positively affects personal performance and involvement in the organisation. The aim of this study was to determine the prevalence, determinants and consequences of burnout and work-engagement in a representative sample of Belgian physicians across all medical specialties.

**Methods** A multi-centre survey was conducted using a 2-phased convenience sample: 1) all general and psychiatric hospitals were invited and 2) an electronic questionnaire was sent to all doctors from the participating institutions. The 29-item "Utrechtse Burnout Scale" measured 3 dimensions, "emotional exhaustion (EE)", "depersonalisation (DP)" and "personal accomplishment (PA)", scored on a likert-scale (0(never)- 6(always/daily)). Doctors with high EE (mean score > 2.50) and high DP (mean score > 1.80 (men)/ > 1.60 (women)) or low PA (mean score < 3.71) were considered at risk. Burnout was defined as high EE and high DP and low PA. The 9-item "Utrechtse Work-Engagement Scale" using a similar likert-scale determined work-engagement (mean score > 5). Socio-demographics, theory-based determinants and consequences were measured using validated scales.

**Results** Thirty-seven hospitals (20%) joined the study and 1198 doctors (47% female, mean age: 43.66) completed the questionnaire. Almost 89% had at least a master-after-master degree and 62% were medical specialists. The most represented specialties were anaesthesia-resuscitation (12%), internal medicine (7.3%) and paediatrics (6.8%). Forty percent, 27.9% and 15.3% suffered from EE, DP and low PA respectively. Burnout was detected in 5.4%, 17.8% were at risk and 63% demonstrated high work-engagement. Important burnout determinants were "workload", "role conflicts" and "emotional strain". "Autonomy",