attending three-year residency training or by five-year working experience in the field of occupational medicine including an elective two-month short course. Occupational medicine is a prevailingly attractive specialty-training program among Thai physicians.

As a country which occupational medicine training program is in its childhood period, lessons learned from prior occupational medicine developed countries, updating contents and employers' demand is the key to success. In Thailand, occupational physician supply is still less than the increasing demand. Additionally, the study among the majority of Thai working populations in the informal sector, particularly in agriculture, and the advancement of current health research schemes would strengthen the training. These are future challenges influencing the progression of occupational medicine training in Thailand.

Oral Presentation

Specific Occupations

0049 A COHORT STUDY OF JOB STRESS AND FATIGUE ON HEALTH PSYCHOLOGY AMONG PROFESSIONAL DRIVERS

¹Yu Jen Lin*, ²Wei Te Wu, ²Saou Hsing Liou, ^{1,2}Yue Liang Guo. ¹National Taiwan University, Taipei, Taiwan; ²National Health Research Institutes, Miaoli, Taiwan

10.1136/oemed-2017-104636.34

Background Long-term effects of work-related factors on risk of psychiatric disorders among professional drivers have not been conclusive. A follow-up study was conducted to evaluate the individual and combined effects of stress and fatigue on drivers' risk of developing psychiatric disorders.

Methods The Taiwan Bus Driver Cohort Study (TBDCS) recruited 1650 professional drivers from a large bus company in 2005. The subjects were interviewed in person and completed two scales of job stress- the Demand-Control-Support model (DC) and Effort-Reward Imbalance model (ERI), and one job fatigue model- Swedish Occupational Fatigue Inventory (SOFI). Psychiatric diseases were the outcomes of this study, including substance abuse, anxiety, mood, and sleep disorders. Cox proportional hazards model was used to estimate the hazard ratio (HR) for psychiatric disorders.

Results Between 2006 and 2012, 108 bus drivers were diagnosed as having psychiatric disorders. Neither DC nor ERI score was associated with psychiatric disorders risk. Drivers with high SOFI (>3.5) had an elevated risk for psychiatric disorders, adjusting for age, BMI, marriage status, education, drinking, smoking, exercise, sleeping pills, bus driving experience and shift work (HR: 2.02, 95% CI: 1.37 to 2.99; p=0.025). Among psychiatric disorders, those having anxiety or mood disorders were related to high SOFI in 2005.

Conclusion Among professional drivers, occupational fatigue as indicated by high SOFI might have predicted higher risk of psychiatric disorders, especially anxiety or mood disorders.

Oral Presentation

Other

0050 WORKING TOWARDS ASSESSING OCCUPATIONAL CARCINOGENIC EXPOSURES IN AN AFRICAN LOWER AND MIDDLE INCOME COUNTRY

^{1,3}Caradee Wright*, ²Johan du Plessis, ¹Renee Street, ³Patricia Forbes, ⁴Hanna-Andrea Rother, ¹Thandi Kapwata, ⁵Manisha Pahwa, ⁵Paul Demers, ^{6,7}Cheryl Peters. ¹South African Medical Research Council, Pretoria, Gauteng, South Africa; ²North-West University, Potchefstroom, North-West, South Africa; ³University of Pretoria, Pretoria, Gauteng, South Africa; ⁴University of Cape Town, Cape Town, Western Cape, South Africa; ⁵Cancer Care Ontario, Toronto, Ontario, Canada; ⁶Carleton University, Ottawa, Ontario, Canada; ⁷CAREX Canada, Simon Fraser University, British Columbia, Canada

10.1136/oemed-2017-104636.35

Aim We aim to use the Canadian CAREX (CARcinogen EXposure) tool, adapted for local context, as a method to assess prevalence and level of exposure to priority occupational carcinogens in South Africa.

Methods The work entails first understanding the CAREX tool, and adapting it as well as reviewing its use in other countries (phase 1). Once the tool and database are prepared, we will gather publicly available data (i.e. Census data, information on chemical use, trade data, published and grey literature, expert consultation, etc.) on occupational exposure to carcinogens as well as exposure monitoring data (phase 2). We will consider all occupational health and safety legislation and its regulations regarding occupational exposure limits, and those carcinogens prioritised locally and internationally, for example by the International Agency for Research on Cancer. All data will be used to estimate the number of South African workers occupationally exposed to carcinogens (and where possible, their level of exposure) (phase 3). Ultimately, this will help guide the development of appropriate health promotion and worker protection programmes, among other resources aimed at cancer prevention (phase 4).

Results Here we will present the experience of the team during phase 1 of the project, including challenges and opportunities encountered.

Expected outcomes Key future outcomes include prevalence of exposure to occupational environmental carcinogens in the South African workplace; also proportions of the workforce in various occupational groups exposed to specific carcinogens; key occupational groups in need of protection; data and information that can be used to guide prevention programs.

Poster Presentation

Exposure Assessment

0051 ESTIMATING WORKER EXPOSURE TO SOLAR UV RADIATION IN SOUTH AFRICA BY POSSIBLE EXTENT AND OCCUPATIONAL GROUP

^{1,2}Caradee Wright*, ^{3,4}Cheryl Peters. ¹South African Medical Research Council, Pretoria, Gauteng, South Africa; ²University of Pretoria, Pretoria, Gauteng, South Africa; ³Carleton University, Ontario, Canada; ⁴Simon Fraser University, British Columbia, Canada

10.1136/oemed-2017-104636.36

Skin cancer has been deemed one of the large, unmet challenges to modern medicine given that it's the most frequently occurring and fastest growing malignant disease in terms of incidence and prevalence. Occupational solar ultraviolet radiation (UVR) exposure is a skin cancer risk factor. Outdoor workers have long exposure hours and need photoprotection against solar UVR, an IARC group 1-defined human carcinogen. In South Africa, skin cancers account for one third of all histologically-diagnosed cancers. Physiological presentation of non-melanoma skin cancers (NMSC) is most common on the head in all population groups. It is expected that occupational exposure plays a role in NMSC aetiology in South Africa, although such data are presently lacking. We aimed to estimate the number of outdoor workers potentially exposed to solar UVR in South Africa. Building on CAREX Canada methods, we used a combination of 2011 Statistics South Africa data and Canadian job prevalence assumptions. Of 51 770 560 South Africans in 2011, the working population was ~13 204 496. Estimated total working population exposed to solar UVR was 1 156 000 (8.7% of the working population). Riskiest job categories were subsistence agricultural and fishery workers and related labourers, and extraction and building trades workers and labourers in mining, construction, manufacturing and transport. Results suggest that solar UVR exposure among outdoors in South Africa may be high. More research is required to identify high-risk groups that may differ in the South African context, perform better risk assessment and inform skin cancer prevention awareness campaigns.

Poster Presentation

Neurological Effects

0052 ODOUR AS A DETERMINANT OF PERSISTENT PHYSICAL AND PSYCHOLOGICAL HEALTH COMPLAINTS AFTER AN OIL TANK EXPLOSION, A LONGITUDINAL STUDY

^{1,2}Gro Tjalvin*, ²Nils Magerøy, ¹Magne Bråtevit, ²Stein Håkon Låstad Lygre, ²Björg Eli Hollund, ³Bente Elisabeth Moen. ¹Department of Global Public Health and Primary Care, Faculty of Medicine and Dentistry, University of Bergen, Bergen, Norway; ²Department of Occupational Medicine, Haukeland University Hospital, Bergen, Norway; ³Centre for International Health, Faculty of Medicine and Dentistry, Bergen, Norway

10.1136/oemed-2017-104636.37

Background Foul-smelling environmental pollution was a major concern following a chemical workplace explosion. Malodorous pollution has previously been associated with aggravated physical and psychological health. Furthermore, in persons affected by a trauma, an incidence-related odour can act as a traumatic reminder. Olfaction may even be of significance in the development and persistence of post-traumatic stress symptoms (PTSS).

Aims To assess whether perceived smell related to malodorous environmental pollution in the aftermath of the explosion was a determinant of subjective health complaints (SHC) and PTSS among gainfully employed adults before and after clean-up of the malodorous pollution.

Methods Questionnaire data from validated instruments, the Subjective Health Complaints Inventory and the Impact of Event Scale-Revised, were analysed using mixed effects models in a longitudinal study design comprising three surveys. Individual odour scores were computed, and the participants (n=486) were divided into high (n=233) and low (n=253) odour score groups.

Results Participants in the high odour score group reported more SHC and PTSS than those in the low odour score group, before and also after the pollution was eliminated. The difference between the groups lasted for at least three years after the pollution was eliminated.

Conclusion Perception of malodorous environmental air pollution was a determinant of both SHC and PTSS. Prompt clean-up might be important to avoid persistent health effects after malodorous chemical spills.

Poster Presentation

Musculoskeletal

0053 EVALUATION OF THE OUTCOME OF THE APPLIED ERGONOMICS TRAININGS IN A CEMENT FACTORY

¹Ferdi Tanir*, ¹Rengin Guzel, ²Ramazan Azim Okyay. ¹Cukurova University Faculty of Medicine, Adana, Turkey; ²Sutcu Imam University Faculty of Medicine, K.Maras, Turkey

10.1136/oemed-2017-104636.38

This study sought to present the outcomes of the applied trainings delivered in a cement factory on the ergonomic risks of a cement factory.

Applied ergonomics trainings were given to 246 employees in a cement factory located in Adana province between May and October 2015. The subject matters of the training were as follows: ergonomic risks at workplaces, occupational diseases, work-related diseases, occupational accidents and protection, reasons for pains on neck, arm and waist and measures for protection against these pains, office ergonomics and ergonomic use of computers and exercises for protection. A test was applied before and after the training of each group.

408 employees, including 311 blue collars and 97 white collars, work in the factory. It was determined that the least known question (15.9%) prior to the training was that smoking causes chronic waist pain. It was found that the subject matter on which employee's knowledge was least improved by the training was the knowledge that the most frequently encountered occupation accident in the cement sector is not explosion 40.7%. Trainings were repeated on five subject matters in particular which were known less than 80% by the trained employees. Following these repeated trainings, the total knowledge level on all questions was increased up to at least 89.4%.

Minimization of exposure to the work-related musculoskeletal disorders is possible with provision of the required information and application, and conduct of periodical delivery of applied trainings, as in our study.