blue coloured ring in periphery of iris (11%), dysmetria (9%), gingivitis (7%), intention tremor (5%), decreased mental labial reflex (5%), decreased Babinski reflex (5%), ataxia (3%) and decreased ankle jerk reflex (2%). About 50% of participants with clinical signs of mercury intoxication were found to have mercury levels in their blood and urine above WHO standards.

Discussion Our findings show higher levels of mercury in urine, blood and hair above recommended values which correspond to the neurological symptoms. There is a need for interventions on the reduction of the mercury exposure among workers.

798 TRENDS AND PATTERNS OF FATAL OCCUPATIONAL INJURIES AND COMPENSATED OCCUPATIONAL DISEASES IN TAIWAN, 1998–2016

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Introduction This study described the trends and compensation patterns of fatal occupational injuries and occupational diseases in Taiwan and examined the similarities and differences with that of selected countries.

Methods Numbers, occurrence rates and compensation benefits of fatal occupational injuries and occupational diseases in Taiwan were obtained from official statistics for the period from 1998 to 2016. Also obtained were official statistics on the numbers and major types of compensated occupational diseases from Japan, South Korea and selected European countries.

Results From 1998 to 2016, the coverage of the workers' compensation insurance program expanded from 79.6% to 86.7%, and occupational fatality had declined substantially but was still higher as compared to other developed countries. Analyses of the levels of claimants' compensation benefits showed that the average amount of benefits for fatal cases had been reduced steadily. Despite of recent efforts by the government in improving the recognition of occupational disease, the compensation rates of occupational diseases remained low (8.18 per 1 00 000 insured). Musculoskeletal disorders were the most dominant type of occupational disease in Taiwan, accounting for up to 66% in 2016, following by respiratory diseases (17%) and stress-related cerebrovascular and cardiovascular diseases (10%).

Discussion The observed improvement in occupational fatality had been accompanied by a downward trend in average compensation benefits, suggesting a shift of occupational fatalities toward low-wage groups. On one hand, under-recognition and under-compensation of occupational diseases were severe, that may due to multiple institutional and administrative barriers as well as lower social awareness on the work-relatedness of disease causality. On the other hand, the high visibility of cerebrovascular and cardiovascular events suggested the social concerns over long working hours and heavy workloads might have played a significant role in the recognition of overwork-related occupational diseases.

839 LONGITUDINAL ASSOCIATIONS OF SHIFT WORK WITH DEPRESSIVE DISORDERS – A SYSTEMATIC REVIEW AND META-ANALYSIS

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Background Shift work, especially night shift work, causes disturbance of sleep, tiredness, and reduced well-being, as it interferes with the circadian chronobiological rhythm and social activities. Shift increases the risk of coronary heart disease and diabetes. Whether shift work increases the risk of depressive disorders is controversial. Whereas crosssectional studies indicate an increased risk, longitudinal studies are inconclusive.

Methods Based on a systematic and extensive literature research in PubMed, Scopus, PsycINFO, PSYINDEX, and Med-pilot, 5682 publications dealing with shift work and mental illness were identified until 2016 December. According to pre-defined selection criteria eleven high quality studies with longitudinal design reporting the relationships between shift work including night work and depressive disorders were analysed.

Results Three out of four studies, restricted in health care professions, predominantly nurses, found no significant relationships between shift work including night work and depressive disorders within period of two-year follow-up. Another five studies among employees working in sectors other than health care yielded indications for an increased risk, during period of up to ten years follow-up, however, a consistent pattern of longitudinal associations was not observed. Supplementary meta-analysis, including five studies, also indicated that shift work elevated the risk of depressive disorders by 42% (95% confidence interval 0.92–2.42). Adverse psychosocial work conditions may partly explain the associations.

Conclusions Even though the findings indicate an increased risk of depressive disorders by shift work or night work, at least outside the health care sector, the evidence is too weak to give general medical advice against shift work with respect to employees' mental health. Rather, it seems adequate to take an individualised approach with continuous support from occupational physicians and practical consideration on psychosocial stress factors that are linked to shift work. How these findings are incorporated in the German guidelines for shift work that are currently updated will be reported.

924 EPIDEMIOLOGICAL PROFILE OF LABOR DISABILITY – IN PARATY

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Introduction The causes of temporary incapacity, established through official expertise (Ministry of Welfare) in Paraty unit, Brazil, are evaluated by establishing the epidemiological profile aiming the proposal of preventive measures.

Methods Retrospective study of all skills that generated financial support for disability in the year 2016 in the city of

Paraty, totaling 1024 skills. The cases are grouped according to occupational group, diagnoses, productive sector and age group and comparing the incidence and severity between the groups. Only cases of temporary incapacity limited to the maximum period of 2 years were studied.

Results The less educated workers, the primary and the male sector showed an extended period of disability. The main diagnosis of disability was according to ICD-10: lesions (group XIX), diseases of the musculoskeletal system (GROUP XIII), blood disease (GROUP II), circulatory group disease (GROUP IX), diseases of the digestive tract).

Discussion The results demonstrate an effect of productive restructuring in our country with the prevalence of diseases classic professionals with decreased prevalence of chronic degenerative diseases and work – related. Most of the lesions are connected to the means of transport (only 2 out of 258 were typical work accidents). These results require a need for articulation of preventive policies in addition to the Occupational Medicine service and training of occupational health professionals for the recognition and prevention of a new epidemiological picture of Brazilian workers.

1769 OCCUPATIONAL DISEASE AND MORBIDITY MODELLING

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Aim of special session To highlight examples and best practice in the area of occupational disease and modelling morbidity.

1769a WORK-RELATED DISEASES AMONG FARMERS IN NORWAY: WHAT DO THE DOCTORS REPORT TO THE LABOUR INSPECTORATE REVEAL, AND WHAT THEY MISS?

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Introduction Doctors in Norway report work-related diseases to the Labour Inspection Authority as required by the Working Environment Act. These reports make the basis for the labour inspectorates registry for work-related diseases (RAS). The purpose of this study is to highlight the lack of reliable data with regards to work-related diseases among Norwegian farmers which hinders our preventive efforts.

Methods Data as they concern the occupation 'farmers' were extracted from RAS for the period 2005–2017. The data among others included variables pertaining to demographics,

occupational exposures, diagnosis, year of reporting, and the type of doctor who reported the disease. We performed descriptive analysis on the extracted data to obtain frequency, and percentage distribution of the data. We plan to calculate incidence rates; however, it has been difficult to find a reliable denominator for such computations.

Result In the period 2005–2017, 616 cases of work-related diseases among farmers were reported. On average 44 reports of work-related disease among farmers were reported to the Labour Inspectorate annually. 95 % of the reported cases were farmers under the age of 67 years. Hearing loss made up about 60% (N=368) of all the cases followed by respiratory diseases that make up 19% (N=116) of all cases. Only a few cases are attributed to other diagnosis groups like skin diseases, musculoskeletal- and psychological disorders.

Discussion The doctors report on work-related diseases among farmer's reveal that hearing loss is still a major challenge. Some of these data are being applied for preventive actions. Having said that, we know from research studies and self-reported data that farmers are exposed to among others dust, gas, pesticides, infectious materials. They work long hours in difficult postures. However, RAS data is missing a large number work-related diseases among the Norwegian farmers which is hindering effective prevention.

1769b SOCIO-DEMOGRAPHIC AND OCCUPATIONAL FACTORS ASSOCIATED WITH SUICIDE AMONG FRENCH FARMERS

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Introduction An excessive risk of suicide mortality among farmers has been observed internationally and in France. However, only few studies tried to explore this issue in terms of socio-demographic and occupational determinants and analyse whether they act as risk or as protective factors. The objective of this study was to investigate associations between suicide mortality and socio-demographic and occupational characteristics in the population of French self-employed male farmers between 2007 and 2011.

Methods The study population included all French male self-employed farmers. Socio-demographic and occupational characteristics were collected from a compulsory social security system for the workers in the agriculture. Causes of death were obtained from the French National Mortality Database. The associations between socio-demographic and occupational characteristics and suicide mortality were examined using a Poisson multivariate regression.

Results Suicide mortality was associated with age between 45 and 54 years (RR 1.60, 95% CI: 1.24 to 2.06), having an individual farm (RR 1.20, 95% CI: 1.02 to 1.42), a farm area of 20 to 49 hectares (RR 1.47, 95% CI: 1.03 to 2.10) and farming as an exclusive activity (RR 1.66, 95% CI: 1.29 to 2.14). Farming in several French regions was associated with a higher risk of suicide, whereas type of farming was not.

Discussion The results highlighted differences in suicide mortality among French male farmers according to their socio-demographic and occupational characteristics. This study provides a better understanding of the suicide mortality among farmers and should help to orientate actions prevention.