industrial fields. Our aim in this study is to draw attention to the increasing number of health problems of forklift operators, caused by working conditions and by structural features and usage of the forklift machines.

Material and Method 140 forklift operators working in industrialised cities of Marmara region were included in the study. As a control group, 140 workers from the same working fields and with similar demographic features were included. All the participants were male and married. Necessary ethical permission was obtained. The first section described the demographic properties of the workers; the second and third sections contained the information about health problems of applied questionnaire.

Results The significant differences in this study, which was conducted on a questionnaire basis, were the number of pre-term deliveries, FGR (fetal growth restriction), interval to conceive, the number of stillbirths, congenital anomalies and newborn malignancies. In addition, the incidence of musculoskeletal system disorders, chronic diseases and the incidence of being under treatment currently were also significantly higher among forklift operators.

Conclusion Related to occupational environment, structural and functional features of the machines used, physical and chemical risk factors, there is an adverse impact on the health of forklift operators the number of whom are increasing every day because of industrialization. The results have achieved shows that the studies evaluating reproductive health and musculoskeletal system of the forklift operators should continue incrementally.

Poster Presentation Intervention Studies

0023 A PROSPECTIVE COHORT STUDY OF THE IMPACT OF RETURN-TO-WORK COORDINATORS IN GETTING INJURED WORKERS BACK ON THE JOB

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Background Globally, 313 million missed at least four days of work in 2010 due to a work-related injury. Extended periods of work absence are costly and associated with poor health outcomes. Interventions that include return-to-work (RTW) Coordinators improve RTW outcomes, though they have often been investigated as part of a larger intervention package. We investigated whether Coordinator impact varies based on the stressfulness of interactions and whether it goes above and beyond functional aspects of their role and other workplace factors.

Methods A prospective cohort study of 632 workers in Victoria, Australia with more than ten days of compensation due to work-related injury. Participants rated the stressfulness of their Coordinator interactions, dichotomised into good and poor, and said whether they had a RTW plan. RTW plans are a functional

responsibility of Coordinators. We analysed responses at baseline and six-month follow-up using logistic regression analyses, adjusting for demographic and workplace factors.

Results At baseline, RTW plans doubled odds of RTW and attenuated the impact of good Coordinator interactions, which had been associated with better RTW outcomes. At follow-up, the reverse was found: good interactions doubled odds of RTW while RTW plans were non-significant.

Conclusions The findings suggest that different aspects of Coordinator intervention have varied impacts on injured workers' RTW outcomes depending on their trajectory. Functional benefits improved outcomes among shorter-duration claims, while interpersonal intervention improved outcomes among longer-duration claims. There are implications for how Coordinators target and interact with injured workers and other ways of improving their effectiveness.

Declaration of potential conflict of interest: I (Tyler Lane) receive salary support from WorkSafe Victoria through a grant for another project, the Compensation and Return to Work Effectiveness (ComPARE) Project. All participants were WorkSafe clients, and WorkSafe conducted initial recruitment.

Oral Presentation Respiratory

0024 THE OCCUPATIONS AT INCREASED RISK OF COPD IN THE UK BIOBANK COHORT

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Background Occupational hazards are important, preventable causes of COPD but the high-risk occupations are uncertain. In an analysis of current occupation in the UK Biobank cohort we reported 14 jobs of increased risk (De Matteis, S. et al. OEM 2016).

Aims and objectives Our aim was to develop these findings using lifetime job-histories to identify occupations at increased COPD risk, taking into account potential confounders.

Methods We used OSCAR, an online tool that automatically codes full job-histories using the UK Standard Occupational Classification (SOC) v.2000 (De Matteis, S. et al. SJWEH 2016). In 2016 we administered OSCAR to all UK Biobank participants with an email address (n=324,653). All paid jobs of >6 months duration, were collated and coded. COPD was spirometry-defined as FEV1/FVC < LLN. Prevalence ratios (PRs) for ever-exposure to each job vs. lifetime office work were estimated using Poisson regression adjusted for age, sex, centre and lifetime smoking.

Results Among 116,375 OSCAR-responders, we analysed the 94 551 with acceptable spirometry data and smoking information. Six occupations showed an increased risk of COPD confirmed by positive exposure-response trends, and in analyses restricted to never-smokers and never-asthmatics. In comparison with our findings for current occupation, some associations were confirmed (e.g. food/drink/tobacco processors: PR 1.70;95% CI:1.17–2.48) while others emerged (e.g. plastics processors: PR 1.86;95% CI:1.09–3.17; agriculture/fishing: PR 1.76;95% CI:1.22–2.55).

Conclusions In order to focus workplace preventive strategies, we are in the process of applying a job-exposure matrix to identify the underlying occupational respiratory hazards.

Oral Presentation

Occupational Medicine (SCOM/Modernet)

0025

CONDUCTING GLOBAL OCCUPATIONAL EPIDEMIOLOGY RESEARCH IN A CHANGING SOCIO-POLITICAL CLIMATE: CASE STUDY OF RESEARCH AMONG SHANGHAI, CHINA TEXTILE WORKERS

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There is a long and continuing legacy of epidemiologists from high income countries conducting occupational health research in low and middle income countries. Opportunities to investigate occupational hazards in relatively high exposure settings and to develop multi-country research partnerships that can lead to disease prevention globally are the main motivations for this type of research. However, it should be appreciated that changes in the cultural, economic, and political environment of the country where the research is conducted can have profound influences on the likelihood of research success. Our research groups have long histories of conducting epidemiologic investigations among textile workers in Shanghai, China. The research includes studies of multiple different cancers and parkinsonism (HC) and respiratory disorders (DCC) in relation to exposures to textile industry dusts and chemicals. Several gene/environment investigations have also been conducted. We present the historical background leading to the research, and the logistical challenges that have emerged over time as political, social, and economic conditions in Shanghai have changed. These challenges include reduced access to workplaces, reduced worker participation rates, and governmentally imposed restrictions on transporting bio-specimens outside of China. Based on our experiences, we can offer some recommendations that occupational epidemiologists in high and low/middle income countries might consider to facilitate collaborative research: being cognizant of national and regional political, social, and economic policy changes; maintaining flexibility in research protocols and budgetary allocations during the course of study conduct; and, keeping lines of communication open throughout the research design and implementation.

Poster Presentation

Dusts and Fibres

0026

DEVELOPMENT OF A NEW PREPARATION METHOD OF HUMAN LUNG TISSUES FOR ANALYSING ASBESTOS FIBRES BY TEM

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Characterisation and quantification of asbestos fibres in human lung tissues are critical for assessing occupational environmental exposures and epidemiological studies of asbestos related disease. To develop a reliable preparation method of human lung tissues for TEM-EDXA analysis, three conventional preparation methods and a new method were compared. Tissue preparation methods compared were; 5% NaOCl(digestion I), 40% KOH(digestion II), a low temperature plasma(ashing), and the new proposed method of 30% H₂O₂ digestion followed by a low temperature plasma (sequential application of the digestion and ashing). After treatment, aliquot of samples were filtered and filters were carbon coated and jaffe washed for TEM analysis. A total of 90 human tissues were tested for comparison.

Results showed that the digestion I method could not detect asbestos fibres because of using limited amount of aliquot sample for analysis. For the digestion II method, organic materials were not completely removed which obscured the images of the asbestos fibres. For the ashing method, clear background images were obtained but some tremolite asbestos fibres were found to be damaged, either bent or broken. Using the proposed method, asbestos fibres were detected clearly and no fibres were damaged.

In summary, we proposed a new preparation method for treating asbestos fibres in the human lung tissues for TEM analysis. Not only showed it a superior quality for asbestos fibres detection but also no damages on asbestos fibres observed. Therefore, we are confident that it can be utilised for preparing human lung tissues for TEM analysis.

Poster Presentation

Musculoskeletal

0027

MUSCULOSKELETAL DISORDER SURVEY OF CAREGIVERS IN DISABILITY SERVICES CENTRES

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