Results 2060 unique articles were screened of which 28 (from 24 studies with 2 88 264 participants) were included. We statistically pooled information from 19 studies, showing that males with high intensity OPA had a higher risk of early mortality than those with light intensity OPA (HR [95% CI]: 1.24 [1.03 1.49]). Such an association was not observed for females (0.88 [0.75 1.03]).

Conclusion These findings support the PA health paradox, with levels of high intensity OPA being associated with ill-health (for males). An explanation for this finding may be the nature of OPA, involving sustained demanding tasks, causing chronically elevated blood pressure and heart rate responses. Males may be more prone than females because of gender differences in OPA, with males more likely to work in higher intensity occupations. Future research (preferably using objectively measured OPA) should further explore these potential mechanisms.

Poster Presentation

Musculoskeletal

0019 THE ASSOCIATION OF ADOLESCENT SPINAL PAIN WITH WORK ABSENTEEISM IN EARLY ADULTHOOD – SIX-YEAR FOLLOW-UP DATA FROM A POPULATION-BASED COHORT

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Introduction For many, spinal pain first develops during adolescence. However, the extent to which adolescent spinal pain impacts work absenteeism later in life is largely unknown. We assessed the association of spinal pain in adolescence with work absenteeism in early adulthood, using a population-based cohort.

Methods Data from a sample of working people in the Western Australian Pregnancy Cohort (Raine) Study (n=476) were analysed. At 17 years of age, spinal pain (low-back or neck) with impact on work and/or study behaviour was self-reported. Six years later (at 23 years), participants replied to four quarterly text messages asking them about their work absenteeism, from which annual total and sickness absence were estimated. Negative binomial mixed-models were used to estimate the association between spinal pain and work absenteeism (Incidence Rate Ratios (IRR) with 95% confidence intervals (95% CI)).

Results Participants with adolescent spinal pain with impact at year 17 reported significantly higher (mean [SD]) total work absenteeism at year 23 (148.7 [243.4] hours/year), compared to those without pain (43.7 [95.2] hours/year); with IRR [95% CI]: 3.9 [1.5 10.3]. Comparable findings were found for sickness absence (IRR: 3.6 [1.3 10.2], with 94.1 [201.5] and 29.3 [75.0] hours/year absence, respectively).

Conclusion Results of our study show a more than three-fold higher risk of work absenteeism in early adulthood among those with adolescent spinal pain with impact compared to those without spinal pain. These findings indicate that pain

behaviour during adolescence can set a stage for work absenteeism later in life, underlining the importance of early pain prevention and management.

Poster Presentation

Injuries

0020 ROAD TRAFFIC COLLISIONS RISK IN PROFESSIONAL DRIVERS WITH DIABETES MELLITUS AND RECEIVING TREATMENT- A PROSPECTIVE COHORT STUDY

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Aim A cohort study was used to follow up the outcomes of DM and treatments to assess for the 6 year risk of RTC event.

Methods Taiwan Bus Driver Cohort Study (TBDCS) recruited 1650 professional drivers in Taiwan since 2005. The subjects were interviewed in person, completed the basic and working patterns questionnaires. Moreover, this cohort of drivers was linked to the National Traffic Accident Database (NTAD), and researchers found 152 new RTC events from 2005 to 2010. History of DM and DM treatments were found from National Health Insurance Research Dataset (NHIRD). Cox proportional hazards model were performed to estimate the hazard ratio (HR) for RTC.

Results The RTC drivers had high frequency of DM (13.8% vs. 7.3%; p=0.007), type 2 DM (13.2% vs. 7.0%; p=0.009), and DM treatment (11.2% vs. 5.8%; p=0.014) in comparison to non-RTC drivers. DM and type 2 DM increased the 6 year RTC risks among professional drivers (HR: 2.31, 95% CI: 1.33 to 4.01; p=0.003, and HR: 2.31, 95% CI: 1.31 to 4.06; p=0.004), even after adjusting for education, caffeine drinks used, sleeping pills used, time since first employment, hypertension, and overnight oxygen desaturation index. Moreover, DM treatment with insulin secretagogue (Sulfonylurea and Meglitinide) and insulin sensitizer (Biguanide) had an increased risk for RTC (HR: 2.22, 95% CI: 1.01 to 4.93; p=0.049, and HR: 2.07, 95% CI: 1.06 to 4.05; p=0.033).

Conclusion This study have proposed recommendations to labour or health care professionals for managing professional drivers with diabetes.

Poster Presentation

Occupational Medicine (SCOM/Modernet)

0022 ASSESSING SELF-REPORTED HEALTH EFFECTS BY FORKLIFT OPERATORS

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Aim Forklift is a special machine used in transporting, lifting, carrying and storing heavy objects in logistics and in all other

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).