industries we conducted a nested case-control study matched on these factors. Analyses were performed with conditional logistic regression.

Results The RR of overall sinonasal cancer (37 cases) was doubled in the upper exposure tertile compared to the lower exposure tertile. For adenocarcinomas (9 cases), the RR in the medium and upper exposure tertiles were 1.17 (95%CI 0.07–18.72) and 7.87 (95%CI 0.97–63.94), respectively. Comparable results were obtained from the case-control analysis indicating limited confounding by age, gender and wood dust exposure. No consistent trend was observed for squamous cell carcinomas.

Conclusion Despite statistically non-significant results and limitations owing to the few cases, this study indicates increased risk of sinonasal adenocarcinomas among high level styrene exposed workers and could signal a carcinogenic effect of styrene.

Poster Presentation

Risk Assessment

0177 OCCUPATIONAL RISK ASSESSMENT ON CHRYSOTILE PRODUCTION

Serik Ibraev, Alexey Alexeyev*, Asset Izdenov. *Karaganda State Medical University, Karaganda, Kazakhstan*

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The research was conducted at the only enterprise in Kazakhstan producing chrysotile - "Kostanai minerals" JSC. Sanitary and hygienic studies were carried out and working conditions were evaluated at 102 workplaces of the Processing Complex (PC). The level of Morbidity with Temporary Incapacity for Work (MTIW) was analysed for 758 employees of the PC workers. The occupational risk assessment was carried out according to the method proposed by professor Izmerov. For the processing and analysis of data, the probabilistic-statistical methods and the odds ratio method are applied.

By using results of the conducted studies of working conditions of PC workers was established that the main unfavourable factors of the labour process are the increased noise level and dustiness of workplace air. As a result of the analysis has established the following features: 1. Female's indicators of the MTIW are more expressed than males; 2. Established that morbidity rates are significantly higher among workers aged 30–39 years and work experience at the PC up to 9 years. 3. According to the main MTIW indicators, the following groups are at the highest level: "Traumas in everyday life", "Diseases of the respiratory organs, including SARS" and "Diseases of the musculoskeletal system"

Based on the degree of significance of the location of occupational risk indicators, the categories and criteria for the health profiling of health of PC workers are defined in the following order: 1) "MTIW" and "integral disability index"; 2) "working environment class"; 3) "occupational disease" and "occupational disease index".

Poster Presentation

Psychosocial

0179 FACTORS ASSOCIATED WITH HIGH NEED FOR RECOVERY IN DIFFERENT AGE GROUPS

^{1,2}Philippe Kiss*, ^{1,2}Marc De Meester, ²Lutgart Braeckman. ¹Securix Occupational Health Service, Ghent, Belgium; ²Ghent University, Ghent, Belgium

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Aim To explore associations of occupational factors with a high need for recovery (HNFR) in different age groups.

Methods The need for recovery (NFR) is a short term health effect, predictive for future long term adverse mental health effects.

This was a cross-sectional study in 17 400 subjects (75.7% participation rate), working in 128 organisations (both private and public). The subjects were divided into 8 age groups.

NFR was assessed by the NFR scale questionnaire (0–100 scale). High need for recovery (NFR >45) was used as outcome variable.

20 work related psychosocial factors were assessed: 13 originating from the Copenhagen Psychosocial Questionnaire (COPSOQ II short version) and 7 were developed within our service. Other variables were: physical workload, gender and age (total study population).

Multivariate log-binomial regression analyses were used to calculate regression coefficients for a HNFR, for the total population and for each age group separately.

Results General prevalence of HNFR was 35.9%. Prevalences were significantly different between the different age groups, ranging from 23.8% to 39.1%.

Physical workload, quantitative demands, work-life balance and discomfort from physical work environment had a significant association with HNFR in all age groups.

Emotional demands, organisational social capital, participation in decision making, possibilities for development, growth opportunities, working more hours than desired, job insecurity, undesirable behaviour and gender were additionally significant in one or more age groups.

Conclusions Four occupational factors need to be considered throughout the whole career. Additional and different factors need to be taken into account according to age group.

Oral Presentation

Occupational Medicine (SCOM/Modernet)

0181 METHODOLOGIES TO IDENTIFY WORK-RELATED DISEASES: IN-DEPTH DESCRIPTION OF SELECTED OF SENTINEL OR ALERT SYSTEMS

¹Annet Lenderink*, ²Jelena Bakusic, ²Sofie Vandenbroeck, ²Charlotte Lambregts, ²Lode Godderis. ¹Netherlands Centre for Occupational Diseases, Coronel Institute on Work and Health, AMC/University of Amsterdam, Amsterdam, The Netherlands; ²Centre for Environment and Health, Katholieke Universiteit Leuven, Leuven, Belgium

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Objectives Drawing on a literature review on sentinel and alert systems for identifying new/emerging work-related diseases (WRDs) a basic typology of systems was developed. These systems differ in characteristics, ability to capture new WRDs and link with prevention. The objectives of the subsequent study of a subset of systems were to describe in-depth aims, drivers and obstacles of the systems and use of their data in practice, for prevention and detecting new/emerging WRDs.

Methods Twelve systems were chosen reflecting the different types (linked to compensation or not, aimed at all WRDs or a subset of diseases, sentinel systems, workers only or general public). Six systems were described based on desk research and six other systems were studied through interviews with different actors to gather information on the operation of the systems and the use of the gathered data for prevention.

Results Several important themes emerged from the comparative tables, related to the design and performance of the system: visibility, reporting methods, exposure assessment, data quality, linkage to other institutions, and related to data use for prevention, alert on hazardous situations, awareness on new/emerging diseases.

Conclusions Each system has its strengths and limitations, closely related to its purpose and the country that developed it. Sentinel systems seem to be best equipped for prevention and alert on new/emerging diseases. Enhancing reporting needs to balance required information and perceived reward for reporters. Embedding of systems in governmental or public health organisations is important in terms of financing, expertise and dissemination of results.

Oral Presentation

Other

0182 HIGH SCHOOL DROPOUT AND CAUSE-SPECIFIC MORTALITY IN YOUNG ADULthood: THE MEDIATING ROLE OF WORK CAREER

^{1,2}Petter Kristensen*, ¹Karina Corbett, ¹Therese N Hanvold, ^{3,1}Rune Hoff, ¹Ingrid S Mehlum. ¹National Institute of Occupational Health, Oslo, Norway; ²Institute of Health and Society, University of Oslo, Oslo, Norway; ³Institute of Basic Medical Sciences, University of Oslo, Oslo, Norway

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Objectives High school dropout has unfavourable consequences. We examine the association between dropout and mortality and estimate the mediating role of an unfavourable work trajectory.

Methods Subjects born in Norway 1967–1976 were followed up in several national registries. The association between dropping out of high school by age 23 and all-cause and cause-specific mortality 10 years onwards were estimated as hazard ratios (HR), applying Cox regression in confounder-adjusted models. Characteristics relating to different trajectories during follow-up were considered as mediators of dropout effects on survival.

Results Thirty-nine percent out of 396 373 participants were classified as dropouts. All-cause mortality during follow-up was 69 per 1 00 000 person-years (2689 cases). The crude

dropout HR was 2.1 (1.9–2.3), being reduced to 1.8 (1.6–2.0) in the confounder-adjusted model. After including the potential mediators in the model, dropouts no longer had an excess mortality compared to non-dropouts (HR 1.0, CI (0.9–1.1)). Mediators relating to financial situation, social benefits and employment accounted for the largest reduction in the association. Deaths caused by overdose and drug dependence were strongly associated with dropout (454 cases; rate 12; confounder-adjusted HR 5.0 (3.8–6.5)). Inclusion of work trajectory factors attenuated the association by 63% (women) and 48% (men).

Conclusions Mortality was clearly associated with high school dropout, strongest for drug-related causes. The results suggest that an unfavourable work career following high school dropout could be an important mechanism for this association.

Poster Presentation

Neurological Effects

0183 PREDICTORS OF WORK ABILITY IN SOLVENT EXPOSED WORKERS

^{1,2}Ari Kaukianen*, ¹Heidi Furu, ¹Hanna-Kaisa Hyvärinen, ¹Markku Sainio. ¹Finnish Institute of Occupational Health, Helsinki, Finland; ²LocalTapiola General, LocalTapiola Group, Espoo, Finland

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Introduction Occupational chronic solvent encephalopathy (CSE) often leads to early retirement. However, little is known about work ability in solvent exposed workers in general. The aim was to study the effect of work-related and non-occupational factors on work ability in active solvent exposed population.

Methods A questionnaire on exposure and health was sent to 3640 workers in four solvent-exposed fields, i.e. painters and floor-layers, boat builders, printers, and metal workers, resulting in 1730 responses. Work Ability Score (WAS), a single question item of Work Ability Index, solvent exposure, demographic factors, chronic diseases, and employment status were considered in univariate and multivariate analysis. The findings were compared to those of corresponding national blue-collar reference population (n=221), and in addition to a small cohort of workers with CSE (n=18).

Results WAS of solvent-exposed workers was lower than that of national reference group, the difference being significant in the oldest age group, but higher than that of workers diagnosed with CSE. Number of chronic diseases and age were the strongest explanatory factors of poor work ability. Solvent exposure was a weak independent risk factor for reduced WAS. Work ability was highest in boat builders, followed by metal workers and printers, and lowest in painters and floor layers.

Conclusions In general, the strongest explanatory factors of reduced WAS were chronic diseases, age, and working status. The weak effect of solvents on work ability is in line with improved occupational hygiene and declined solvent exposure levels in an industrialised country. As a single question WAS is easily included in occupational screening questionnaires.