

However, approximately one-third with PTSD have cognitive impairment regardless of exposure level.

0075 LEVERAGING MULTIPLE DATA SOURCES TO ASSIST OSHA IN ENFORCEMENT: EXAMINING ILLINOIS WORKERS' COMPENSATION DATA ON AMPUTATIONS

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Objectives The US Occupational Safety and Health Administration (OSHA) relies on survey data to target high risk employers for safety inspections and enforcement. However, OSHA has limited resources and randomly targeting employers for safety inspections as a general strategy is inefficient. In this study, we explore the use of an alternative data source to assist OSHA with a more targeted inspection program.

Method We summarised Illinois Workers' Compensation Commission (IWCC) court filings for amputations from 2007 through 2012 and identified the industries and companies that are the top offenders for amputations in Illinois within this dataset.

Results In total, there were 1260 amputations, of which 27.1% were severe amputations (not restricted to digits). The industrial sectors with the highest proportion of severe amputations were the mining (50.0%), government (40.6%), and personnel/employment services (temp employment) (40.0%) sectors. The analysis identified a short list of companies and their corresponding worksites, comprising nearly 20% of the amputation claims filed through the court system.

Conclusions Using alternative datasets that provide a specific list of the worst offenders in a region can guide a more efficient use of OSHA resources and create a system that targets the companies with a poor safety record. Random inspections using industry level data from the US Bureau of Labour Statistics does not differentiate between companies that invest in safety within high risk industries from the poor actors. Workers' compensation data is only one resource among many that can be utilised to assist OSHA with targeted inspections of high risk companies.

0077 RECONSTRUCTION OF EXPOSED COHORT AND CUMULATIVE DOSE OF RADIO-CONTAMINATED BUILDING RESIDENTS FOR EPIDEMIOLOGICAL STUDY - UPDATED INFORMATION

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Objectives The purpose of this study is to reconstruct of RCB cohort and to survey occupancy factors for estimation of

cumulative dose in study of health risk of Radio-contaminated building (RCB) occupants.

Method The cohort of RCB occupants was established based on household, school and labour registration. Survey of current and retrospective occupancy factors in each age stratum was conducted to estimate the cumulative dose. Risk-period adjusted cumulative dose was generated in this study.

Results There were totally 32 622 in this study cohort, including 13 120 residents of RCBs, 15 368 students in RCB schools, and 4328 labours in RCB business workplaces. The mean and maximal dose in the year of RCB built was 32.7 and 998.56 mSv, respectively (Table 2). The main difference between retrospective (RCB residents) and current (general population) occupancy factors was RCB residents in the past had 2 more hours in living room, while current general population had 2 more hours in bed room. When bedroom was subdivided into bed and desk, we found current general population had 2 more hours in the desk of bed room. In total, the mean cumulative dose was 7.06 mSv with range of 0–1751 mSv. The mean cumulative dose for residents, labours, and students were 16.08, 2.91, and 0.48 mSv, respectively.

Conclusions We have established a new RCB cohort and provided new information of cumulative dose estimation. These data could provide valid information on the risk of cancers and non-cancer diseases at low dose and low dose-rate radiation exposure.

0078 WORK ORGANISATIONAL CHARACTERISTICS AND PSYCHOLOGICAL DISTRESS IN FRENCH CALL-CENTRES. IS THERE A DIRECT EFFECT?

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Objectives In cross sectional studies, relationships between perceived stressors and self-reported health are suspected of mono-method bias related to negative affectivity. The purpose of this work was to test if work organisational characteristics (WOC) reported by managers were related to psychological distress (PD) reported by call-handlers, taking into account their perception of work conditions (perceived strain) and usual individual confounders.

Method Managers of 107 call-centres were queried by occupational physicians on their call-centres' WOC. 4002 call-handlers (2,929 women were considered here) of these call-centres completed self-reported questionnaires in order to evaluate perceived work strain (Karasek and Siegrist questionnaires) and PD (12-items General Health Questionnaire). A 2-level analysis tested the relationships between 14 WOC and PD score, with and without adding perceived strain as confounder, assuming that unchanged coefficients between WOC and PD score flag a direct effect of WOC on psychological distress. We also analysed perceived strain as an effect modifier for WOC using interactions.

Results Five of 14 WOC were significantly related to the PD score: type of calls, call-centre size, number of activity parameters displayed on screen, instructions for client relationships, and required control role of supervisor. In adding perceived strain, the relationship only remained for the type of call.

Conclusions Main results of this study are (1) existence of relationships between WOC reported by managers and psychological distress reported by call-handlers (2) most of effects of WOC are moderated by the perception of work strain.

0080 **RETROSPECTIVE EXPOSURE ASSESSMENT ON THE PHOTOLITHOGRAPHY PROCESS IN SEMICONDUCTOR MANUFACTURING FACILITY**

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Objectives The purpose of this study was to assess potential occupational exposure to chemicals among workers using both qualitative and quantitative information during specific job tasks on the photolithography process of a semiconductor manufacturing facility.

Method Historical exposure measurement data from 1997 to 2012 (n = 1347) were collected and classified by each type of chemical during 8 of 36 job tasks, and hallmark risk assessment was performed to determine control bands by job task of interest using the qualitative information on health hazard, duration of use, quantity, exposure control, etc. Finally, Bayesian Decision Analysis was performed to evaluate potential exposure ratings for those 8 job tasks by combining the prior distribution and likelihood distribution into the posterior distribution.

Results Control bands for 8 job tasks of interest were determined as 1, interpreting that workers use appropriate industrial hygiene, follow recommended job practices, wear personal protective equipment, and install proper ventilation systems. Arithmetic mean and standard deviation for 7 types of chemicals from historical exposure measurement data were 2-heptanone 0.013 ± 0.011 ppm, 1-methoxypropyl-2-acetate 0.163 ± 0.261 ppm, acetone 0.456 ± 0.609 ppm, ethyl 3-ethoxy propionate 0.131 ± 0.106 ppm, ethyl lactate 0.058 ± 0.067 ppm, isopropyl alcohol 0.594 ± 0.923 ppm, and n-butyl acetate 0.071 ± 0.368 ppm, respectively, and all concentrations of chemicals were below 10% of OELs. Therefore, exposure ratings of the 8 job tasks were determined as exposure category 1, indicating that the 95th percentile of exposures infrequently exceed 10% of the OELs.

Conclusions In conclusion, the study findings suggest that potential exposures to chemicals of interest among semiconductor workers for 16 years were very low (below 10% of the OELs) and “highly controlled.”

0081 **THE ASSOCIATION BETWEEN STATINS USE AND RISK OF HOSPITALIZATION FOR ACUTE HEPATITIS IN PATIENTS WITH HBV INFECTION**

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Objectives Statins are commonly used to prevent coronary heart disease and stroke, but they may increase the risk of hepatotoxicity and muscle toxicity. Hepatitis B virus (HBV) infected patients are more susceptible to acute hepatitis. However, the safety of statins use in patients with HBV infection is unclear. The purpose of this study was to investigate the association between statins use and risk of hospitalizations related to acute hepatitis in patients with HBV infection.

Method Ours study was a population-based retrospective cohort study. We used a nationwide data of HBV-infected patient from 1999 to 2010 from the Taiwanese National Health Insurance database. Cox proportional hazards regression was used to calculate the hazard ratios (HRs) and 95% CIs for the association between statins use and the occurrence of acute hepatitis in the HBV-infected study cohort.

Results A total of 255 344 HBV-infected patients were included in the study cohort. Of these patients, 127,672 (50%) had used statins, and 283 (0.11%) were diagnosed with acute hepatitis within one year and incident rate of acute hepatitis in patients with HBV infection was 110.9 per 100000 person-years. After controlling for potential confounders, no association of acute hepatitis between statins user and non-statin user was found in different follow-up periods and doses within one year.

Conclusions Among patients with HBV infection, statins use may be not association with acute hepatitis regardless of larger cumulative dose, drug class of statins. Statins given to HBV-infection patients may not associate with severe liver injury.

0082 **DIABETES MANAGEMENT AT WORK**

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Objectives This study aims to demonstrate the interaction between diabetes and work, but also to identify any difficulties that a diabetic patient can meet at his place of work, which could hinder the daily management of the disease.

Method This is a descriptive, cross-sectional study that was conducted in the month of September 2012 until April 2013. The support for the survey is a pre anonymous self-administered questionnaire, among diabetic patients in employment in various institutions under agreement with the Department of Occupational Medicine of the University Hospital of Sidi Bel-Abbes during their periodic visits.

Results

- The final sample consisted of 83 diabetics with 61.4% men and 38.6% women, the average age of employees is 50 years, 62.6% of our patients are non-insulin-treated, 77.1% are type 2 diabetes, 68.7% for patients work schedules are compatible with meals and taken the treatment, and 65.1% find it difficult to follow the diet to work, 53% reported hypoglycemia at work with variable severity.
- The type of diabetes is strongly linked to hypoglycemia occurred in the workplace and change of occupation (p = 0.022, p = 0.008)
- Two factors related to the disease: duration of illness affects the occurrence of hypoglycemia (p = 0.014) and has a link with the achievement of capillary blood glucose and Modified Work.

Conclusions We have seen with the study, some socio-professional factors and factors related to the disease can occur in diabetes management.

0083 **OCCUPATIONAL INJURIES AT THE COMMUNITY LEVEL**

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