

students' baseline knowledge Faculdade de Medicina da Universidade de São Paulo (internal fifth-year residents and first-year internal medicine) as well as evaluate their own health habits.

Method We conducted a cross-sectional study in which we applied two questionnaires that had been used in previous studies by Ferreira Junior, 2011. The questionnaires so called 1) "Survey of attitudes and behaviour" and 2) "Questionnaire assessment of knowledge in health promotion." Regarding the epidemiological data to submit descriptive statistics and Excel filters the table.

Results The higher scores among graduate students, were related to nutrition and oral hygiene, both at present as expected in a year. Questions about professional attitude in their 13 items' scores were higher post-graduate training in the item. In other items, students' grades and graduation from residency and postgraduate students were equal. When comparing the mean of graduate students called in questionnaire 2, all items showed lower values in relation to the notes of interns and residents.

Conclusions The loss in quality of care is undeniable, since there is awareness on the part of the respondents own lack of technical knowledge updated with regard to health promotion that contrasts with the self-perception of adequate training to do so.

0294 CARDIOVASCULAR DISEASE AS A RISK FACTOR FOR DISABILITY RETIREMENT

Eduardo Sá, Rafael Torres, Lys Rocha. *Faculdade de Medicina Da Universidade de São Paulo, São Paulo, Brazil*

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Objectives The relationship between work and some diseases that they can provide is already known for a long time. Because of these conditions some projects were created to improve conditions of work and to support the worker loses her job capacity such, among them the disability retirement. The objective of this study was to identify cardiovascular disease as risk factors for disability retirement.

Method Was realised a literature review, including articles published in 2000 to 2013, being surveyed those in the period from April to November 2013, using the following descriptors: risk factors, pensions and cardiovascular diseases in databases PUBMED/MEDLINE, BIREME, SCOPUS, WEB OF SCIENCE and COCHRANE. Found, respectively, 8, 8, 27, 2 and 0 items. After deleting the duplicate items, those whom were not in English or Portuguese and non revolved around the topic of study, 7 remained. All showed a positive association between disability retirement and cardiovascular diseases.

Results In the study used to compare relative risk for cardiovascular disease retirements with musculoskeletal found the same risk for both diseases. Other studies showed association between increased uric acid, poorly controlled hypertension, perceived stressful work postures and work and increased risk for this retirement. There is a huge investment in prevention campaigns for workers' health to prevent the musculoskeletal disease, but not always the same commitment to the prevention of the cardiovascular.

Conclusions In conclusion cardiovascular disease has high significance for the health of the employee, being an important risk factor for disability retirement, and should be encouraged to implement policies to prevent these.

0295 OCCUPATIONAL EXPOSURE TO CRYSTALLINE SILICA AND THE RISK OF LUNG CANCER IN CANADIAN MEN

^{1,2}Linda Kachuri, ³Paul J Villeneuve, ⁴Marie-Élise Parent, ⁵Kenneth C Johnson, ^{1,2}Shelley A Harris. ¹Dalla Lana School of Public Health, University of Toronto, Toronto, ON, Canada; ²Prevention and Cancer Control, Cancer Care Ontario, Toronto, ON, Canada; ³Department of Health Sciences, Carleton University, Toronto, ON, Canada; ⁴INRS-Institut Armand-Frappier, University of Quebec, Laval, QC, Canada; ⁵Department of Epidemiology and Community Medicine, University of Ottawa, Ottawa, ON, Canada

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Objectives Crystalline silica is a recognised carcinogen, but the association with lung cancer at lower levels of exposure has not been well characterised. This study investigated the relationship between occupational silica exposure and lung cancer, and the combined effects of cigarette smoking and silica exposure on lung cancer risk.

Method A population-based case-control study was conducted in 8 Canadian provinces between 1994 and 1997. Self-reported questionnaires were used to obtain a lifetime occupational history and information on other risk factors. Occupational hygienists assigned silica exposures to each job based on concentration, frequency, and reliability. Data from 1681 incident lung cancer cases and 2053 controls were analysed using logistic regression to estimate odds ratios (OR) and their 95% confidence intervals. Models included adjustments for cigarette smoking, lifetime residential second-hand smoke, and occupational exposure to diesel and gasoline engine emissions.

Results Relative to the unexposed, increasing duration of silica exposure at any concentration was associated with a significant trend in lung cancer risk (OR ≥ 30 years: 1.67, 1.21–2.24; p_{trend}=0.002). The highest tertile of cumulative silica exposure was associated with lung cancer (OR: 1.81, 1.34–2.42; p_{trend}=0.004) relative to the lowest. Men exposed to silica for ≥ 30 years with ≥ 40 cigarette pack-years had the highest risk relative to those unexposed with < 10 pack-years (OR: 42.53, 23.54–76.83). The joint relationship with smoking was consistent with a multiplicative model.

Conclusions Our findings suggest that occupational exposure to silica is a risk factor for lung cancer, independently from active and passive smoking, as well as from exposure to other lung carcinogens.

0296 THE NIEHS GULF STUDY: CORRELATIONS OF CONCENTRATIONS BETWEEN VARIOUS OIL CHEMICALS AND TOTAL HYDROCARBONS

¹Caroline Groth, ¹Sudipto Banerjee, ²Tran Huynh, ²Gurumurthy Ramachandran, ³Mark Stenzel, ⁴Patricia Stewart, ⁵Aaron Blair, ⁶Lawrence Engel, ⁶Dale Sandler, ⁶Richard Kwok. ¹Division of Biostatistics, University of Minnesota, Minneapolis, MN, USA; ²Department of Environmental Health Sciences, University of Minnesota, Minneapolis, MN, USA; ³Exposure Assessment Applications, LLC, Arlington, VA, USA; ⁴Stewart Exposure Assessments, LLC, Arlington, VA, USA; ⁵National Cancer Institute, Gaithersburg, MD, USA; ⁶Epidemiology Branch, National Institute of Environmental Health Sciences, Research Triangle Park, NC, USA

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Objectives In the 2010 Deepwater Horizon Oil Spill, thousands of workers may have been exposed to various potentially harmful chemicals found in crude oil including benzene, ethylbenzene, xylene, and toluene. These and total hydrocarbons (THC) (a composite of all the volatile chemicals in crude oil) were monitored. Over 150 000 personal measurements were taken, but many of the measurements of individual chemicals were

below the analytic method's limit of detection (LOD), making estimation of exposure levels challenging. The concentration of each chemical relative to THC is related to the concentration of the chemical and THC in the source crude oil. Knowing these relationships, we can develop models to predict concentrations of individual chemicals from THC concentrations when only a THC concentration was detectable. The goal of this study was to determine the correlations between concentrations of the various oil chemicals and THC for use in situations where only THC was above the LOD.

Method We calculated correlations on the rig ships and support vessels located near the well by vessel and time period using linear regression analysis that accounts for censored data.

Results We found significant differences in correlations between concentrations of the chemicals and THC across vessels and over time that likely reflect different vessel activities and degrees of crude oil weathering throughout the response and clean-up efforts.

Conclusions Correlations between concentrations of the chemicals of interest and THC can be used to estimate the chemical's concentration when its measurement is below the LOD.

0297 THE PREVALENCE OF RISK FACTORS ASSOCIATED WITH COMPUTER VISION SYNDROME AMONG COMPUTER WORKS IN SÃO PAULO, BRAZIL

Eduardo Sá, Lys Rocha. *Faculdade de Medicina Da Universidade de São Paulo, São Paulo, Brazil*

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Objectives The aims of this study were to investigate work conditions, to estimate the prevalence and to describe risk factors associated with Computer Vision Syndrome among computer works in São Paulo.

Method The methods include a quantitative cross-sectional observational study and an ergonomic work analysis, using work observation, interviews and questionnaires. The case definition was the presence of one or more specific ocular symptoms answered as always, often or sometimes. The multiple logistic regression model, were created using the stepwise forward likelihood method and remained the variables with levels below 5% ($p < 0.05$).

Results The operators were mainly female and young (from 15 to 24 years old). The call centre was opened 24 h and the operators weekly hours were 36 h with break time from 21 to 35 min per day. The symptoms reported were eye fatigue (73.9%), "weight" in the eyes (68.2%), "burning" eyes (54.6%), tearing (43.9%) and weakening of vision (43.5%). The prevalence of Computer Vision Syndrome was 54.6%.

Conclusions The organisation and psychosocial factors at work should be included in prevention programs of visual syndrome among call centres' operators.

0298 TECHNICAL EPIDEMIOLOGICAL NEXUS (NTEP) IN BRAZIL: A CRITIC EVALUATION AFTER 5 YEARS OF ITS APPLICATION

Eduardo Sá, Miguel Fernandes. *Faculdade de Medicina Da Universidade de São Paulo, São Paulo, Brazil*

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Objectives A study has been made regarding the 5 years of Technical Epidemiological Nexus' application, analysing the amounts

collected, the number of occupational accidents recognised in the period, the benefits granted and the main diseases recognised as accidentary.

Method It has been performed a bibliographic review of the literature, a study of chapters from books, scientific articles published and research on the *website* of the Social Providence, evaluating the statistic data from 2007 to 2011 and comparing with the last years without the new previdenciary legislation.

Results From the application in NTEP for the recognition of accidents and aggravations to workers' health, the values collected by INSS increased progressively, with an increase of 14.8% in 9 months of 2007. The number of benefits granted rose 4,3%, from 4 million in 2006 to 4.8 million in 2011. With NTEP there has been an increase in the number of pathologies related to occupation recognised by INSS. Of the 653.1 thousands accidents recognised in the year of 2007, 131.6 thousands (20,15%) were recognised by the new rule, without the need of occupational accident communication. The pathologies of the spine (CID M54) and the ones of the shoulder (CID M75) are among the ones of highest incidence as occupational pathologies.

Conclusions In the five years applying the technical epidemiological nexus there were increases in levy of the INSS from the number of benefits granted and the recognition of occupational accidents, the pathologies of the shoulder and spine being the highest ones to increase after the new rule.

0299 THE NIEHS GULF STUDY: RECALCULATION OF EXPOSURE MEASUREMENT DATA BETWEEN THE LIMIT OF DETECTION (LOD) REPORTED BY THE LABORATORY AND THE ANALYTICAL METHODS' LODS

¹Mark Stenzel, ²Patricia Stewart, ³Aaron Blair, ⁴Lawrence Engel, ⁴Richard Kwok, ⁴Dale Sandler. ¹*Exposure Assessment Applications, LLC, Arlington, VA, USA;* ²*Stewart Exposure Assessments, LLC, Arlington, VA, USA;* ³*National Cancer Institute, Gaithersburg, MD, USA;* ⁴*Epidemiology Branch, National Institute of Environmental Health Sciences, Research Triangle Park, NC, USA*

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Objectives BP contractors collected nearly 25 000 personal passive dosimeter samples (about 150 000 individual exposure measurements, primarily benzene, ethylbenzene, toluene, xylene and total hydrocarbon (THC)), related to the response and cleanup of the Deepwater Horizon oil spill. BP used a sampling strategy based on compliance with applicable occupational exposure limits (OELs). Most of the measurements were below the reported limit of detection (censored). This occurred because the analytic laboratories calibrated their instruments relative to the chemicals' OELs and they reported measurements below the lowest calibration standard (approximately 5% of the OEL) as less than the LOD. In an epidemiology study, however, all exposure levels are of interest rather than only those levels related to an OEL. Published evaluation studies on the analytical methods indicate that the methods were capable of measuring much lower concentrations than those reported. This presentation discusses the process used to recalculate the measurement data to the analytic method's LOD.

Method Gas chromatograph output, the dosimeters' and chemicals' physical property data, and the slope and intercept of calibration curves were used to calculate concentrations below reported LODs.

Results The recalculation effort resulted in the reduction of all censored measurements from 92.8% to 60.2% and the THC censored measurements from 71.9% to 19.1%.