were males. Of the males 37.8% (n = 189) were regular smokers, while 24.6% (n = 123) consumed alcohol daily.

The prevalence of shoulder pain, wrist/hand pain, knee pain, neck pain and back pain in the past one month was 4.4% (n = 32), 4.5% (n = 33), 5.4% (n = 39), 4.7% (n = 34) and 6.1% (n = 44) respectively. Workers working in fabricated metal product industries had the highest proportion of having shoulder pain (7.4%, n = 07). In the same category wrist/ hand pain was 10.5% (n = 10) and knee pain was 9.5% (n = 09). Thirty one (4.3%, n = 31) were having asthma prior to the study.

The prevalence of wrist pain (p = 0.025) and knee pain (p = 0.006) were significantly associated with the industry category. Sex of the worker was not significantly associated any musculoskeletal disorders assessed.

Conclusion Musculoskeletal diseases are prevalent among the study population. This needs to be investigated in-depth to identify the correlates to plan interventions.

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STRESS, ADVERSE PSYCHOSOCIAL RISKS AND FATIGUE EFFECTS IN MEDICAL RESIDENTS AT A HIGH SPECIALTY MEDICAL UNIT

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Objective The purpose of this study was identify the determinants of fatigue.

Methods A cross-sectional study in 153 medic residents' volunteers from diverse specialties at a high specialty medical unit of the Mexican Institute of Social Security was conducted. Sociodemographic and job information were collected. The presence of stress, burnout, depression and fatigue were assessed, as well as unfavorable psychosocial factors, violence and quality of working life at risk. The model of fatigue stress determinants was adopted and a multiple logistic regression model for that purpose was completed.

Results 27% (153) took part. 61.4% referred depression and 50.3% mentioned loss interest for daily activities. From 28 to 74% pointed adverse psychosocial factors at work; 93.5% reported presence of violence. Of 8.5 to 89% had working life with poor conditions; 61.4% had stress, 63.4% fatigue, and 32.7% burnout syndrome. In multiple logistic regression model, stress, OR: 8.9 (95% CI: 3.4–23.2, p < 0.001), burnout, OR: 3.4 (95% CI: 1.02–11.4, p = 0.045), psychological demands at work, OR: 4.2 (95% CI: 1.5–12.1, p = 0.007), and depression, OR 2.9 (95% CI: 1.12–7.7, p = 0.028) were identified as determinants of fatigue.

Conclusions The job stress persistence can lead to chronic fatigue syndrome, and this probably is affecting the quality medical care afforded.

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PRE AND POST-VACCINATION PANDEMIC A(H1N1) PMD09 ANTIBODIES SEROPREVALENCE IN MEXICAN HEALTH WORKERS

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Objective To identify seropositivity for influenza A (H1N1) pdm09 in Social Security Mexican Institute (IMSS) health staff in the Valley of Mexico.

Methodology Two stages cross sectional study was conducted on a random sample of pre-vaccination and post-vaccination against pandemic virus IMSS workers from Valley of Mexico and by job category. A social and labour questionnaire was applied and presence of antibodies against influenza A (H1N1) pdm09 in serum neutralisation test for pandemic virus retroviral pseudotypes, were determined. Two logistic regression models to identify risk factors in both stages were conducted.

Results 1378 workers from 13 workplaces, with 41.7 years of age average and 68.7% (947) of them women, participated in both stages. The A (H1N1) pdm09 seroprevalence was at first stage: 26.5% (365) (7.4% - 43%) vs. 20.8% (11) in controls (blood donors); and at the second stage: 33% (215) (18.2% - 47%) in vaccinated and 27% in unvaccinated (196) (11.6% - 50%). In regression models, occupational exposure to patients with influenza suspicion, medical job category, and vaccination, determined the seropositivity of antibodies against the pandemic virus.

Conclusions Seropositivity of antibodies against pandemic virus that we found in both groups, is in the range of the international studies: in vaccinated (2.8 to 40.9%) as in unvaccinated (18.8 to 64.7%). The response in the vaccinated (33%) and unvaccinated was intermediate (27%) so, between 67% and 73% of them continued to be susceptible to infection with influenza pandemic. Given the relatively low seropositivity induced by vaccine, is imperative to adopt and put into practice in permanent basis, hygienic and safety measures on health staff and populations under risk, and develop a permanent epidemiologic surveillance program over Mexican health system workers.

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ROTATING NIGHT SHIFT WORK AND HEALTH STATUS AMONG NURSES AND MIDWIVES

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Objective Night shift work has been linked to several chronic diseases such as gastrointestinal disorders, cardiovascular disease and diabetes, although the epidemiological data for rotating night shift nurses are inconclusive. The aim of our study was to assess the prevalence of selected diseases and symptoms among nurses and midwives according to their current system of work and the history of night shift work.

Methods We performed a cross-sectional study of 725 nurses and midwives (354 working on rotating night shifts and 371 daytime workers). Data were collected via an in-person interview, according to the "Standard Shiftwork Index". The prevalence of particular diseases and symptoms were compared between the groups. The odds ratios were calculated with the logistic regression analysis adjusted for important confounding factors and they were calculated according to the frequency of

night shifts in the current work schedule and the total duration of night shift work.

Results Chronic back pain, hypertension and thyroid disease were the most common diseases in the total population of nurses and midwives. The prevalence of thyroid disease was higher than in the general population of Polish women (21.2% vs. 10%) and the relative risk of this disease increased with increasing duration of night shifts work. The analysis did not show significantly higher frequency of any disease or symptom in the night shifts nurses compared to the day workers. The analysis showed significantly increased risk of feet swelling in women working 8 or more night shifts per month (OR = 8.55; 95% CI: 1.02–71.80).

Conclusions We did not find significant increased risk of any of the diseases or symptoms among night shifts nurses than among the women working only during the day. The increased prevalence of thyroid disease among the women with long duration of night shift work warrants further epidemiological studies.

43 INCIDENCE OF SHARP-POINTED INJURIES IN PERSONNEL OF A HIGH SPECIALTY HOSPITAL FROM THE MEXICAN INSTITUTE OF SOCIAL SECURITY, 2004–2010

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Objective To determine the incidence of sharp pointed injuries by working category and its characteristics.

Material and Methods Information of sharp pointed injuries from 2004 to 2010 was collected using EPINet, which registered: working traits, service, description of the accident, object, and anatomical part among others.

Results We recorded 181 injuries, with a mean (SD) [min-max] of: age 36 (8.5) [18–56] years; length of service in the hospital 10.6 (7.7) [0.5–27] years. The greatest proportions of injuries were in the departments of: Adolescents 31.5%, NICU 25% and Operating Room 16%. The first working shift had the largest amount of accidents with 71.7%. Moderate lesions were the most frequent with 64%, followed by superficial 21% and severe 15%. Of all the personnel, 55% didn't use gloves, 41% used one pair and 5% used double pair of gloves; 49% was injured in the right hand and 48.6 in the left hand. The main working categories injured were: nurses 48%, medical residents 23.2%, general services 16.6%, and physicians 6.6%. The incidences were: medical residents 31.5%, nurses 13.8%, general services 11.5% and physicians 7%. Taking into account the ones with lower risk, we observed a greater ratio of incidence in the medical residents: 4.5 vs physicians and 2.3 vs nurses.

Conclusions Medical residents are in greater risk of having sharp pointed injuries followed by nurses and general services. It is necessary to identify the causes and take preventive measures as well as developing permanent epidemiological surveillance of these risks.

44 BURNOUT SYNDROME IN MEDICAL RESIDENTS OF A SCHOOL HOSPITAL AND THE ORGANISATIONAL ERGONOMY FACTORS

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Objectives To describe the presence of Burnout syndrome among doctors in residency medical postgraduate and to evaluate in organisational ergonomics factors in the framework of a school hospital which predict that syndrome.

Methods Cross-sectional study performed in a school hospital in São Paulo, southeastern of Brazil. Participants were 24 doctors in two-years medical residency program of Internal Medicine. They answered questionnaire about sociodemographic data, clinical complaints, occupational informations and perception of work organisational predictors for Burnout Syndrome. The outcome was analysed by their response of Maslach Burnout Inventory (MBI).

Results Most of the participants were female (58.3%), single (91.7%), living alone (66.7%), being the first year of the program (54.2%), working 60 hours/week (83.3%), have another job (62.5%) and reported high number of complaints (54.2%). The mean age of participants was 26 years old. The Burnout Syndrome was characterised in 50% of participants. The frequency of perceived work organisation stressors were: excessive demands (66.7%) with high control at work (79.2%), low recognition by preceptors (87.5%), low valuation by the institution (79.2%) and low support from colleagues (62.5%). Most of them considered their work important (70.8%).

Conclusions These workers presented Burnout syndrome as reported in other studies with similar population. The perception of predictors for this condition in their postgraduate program shows a stressful situation. More than employees, they have a study bond with this program and negative impacts in their learning could happen. It is necessary to analyse organisational factors to create policies aimed to minimise occupational and psychosocial stressors.

45 ESTIMATION OF THE NATIONAL INCIDENCE OF NEEDLESTICK INJURY IN TAIWAN HEALTHCARE WORKERS

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Objectives The purpose of this study was to determine which of the following denominators, number of health care workers, number of hospital beds, and number of inpatient-days would predict best of the national number of needlestick injury (NSIs) and the national number of biological exposures to specific bloodborne pathogens.

Methods Four years after our first attempt at calculating the national incidence of NSIs in Taiwan healthcare workers (HCWs) from 14 hospitals, using Exposure Prevention Information Network (EPINet) data, we are now able to analyse the much larger dataset reported from 49 hospitals that consist of 44,939 HCWs.

Results A total of 1,837 NSIs were reported between Jan 1st and Dec 31st 2011. The annual number was estimated to be 5,663 NSIs per hospital size, 8,319 per HCWs, and 7,828 per inpatient-day; indicating similar estimates using different denominators. The estimated annual frequency of pathogen-specific NSIs was 970 for hepatitis B, 1,094 for hepatitis C, and 99 for HIV.