

Abstracts

Introduction Epidemiological data on musculoskeletal disorders are a valuable source of information for the creation, development and implementation of prevention programs for their control.

Objective The objective of the study is tracking the dynamics of the registered by Sofia City Regional Health Inspection (SRHI) outpatient prevalence and incidence of musculoskeletal diseases in the city of Sofia in the period 2009-2013.

Methods Documentary analysis of the data obtained from SRHI concerning Sofia outpatient prevalence and incidence from Diseases of the musculoskeletal system and connective tissue (class XIII - MSD) for the period 2009–2013 was made, the results have been presented per 1000 inhabitants and in percentage. Data were statistically analysed by SPSS 11.1.

Results The results were based on the GPs and outpatient specialists' reports. An average of 41.94% of the GPs and outpatient specialists had provided statistical data for the period 2009–2011, respectively 58.06% had not. The results on the prevalence of the population of the city of Sofia from MSD in the period 2009–2013 were as follows: in the year of 2009–151.77 (6.78%); 2010: 175.71 (8.30%); 2011–162.49 (7.49%); in 2012–139.12 (6.35%); in 2013–139.49 (7.16%). The incidence: in the year of 2009–43.62 (5.69%); in 2010–61.19 (7.40%); in 2011–52.82 (6.25%); in 2012–54.45 (6.07%); in 2013–41.81 (5.62%). Significant differences in the MSD-morbidity were found, they can be explained mainly by differences in the number and size of the practices, which had returned filled statistical reports to SRHI in different years.

Conclusion There is a need for comprehensive statistical information, delivered to SRHI through electronic-based solutions that allow mandatory daily enter data from outpatient practices to be automatically exported to statistical reports to SRHI.

Environmental Exposure Assessment

P077 HEAT STRAIN, VOLUME DEPLETION AND KIDNEY FUNCTION IN CALIFORNIA AGRICULTURAL WORKERS

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Background Agricultural work can expose workers to increased risk of heat strain and volume depletion due to repeated exposures to high ambient temperatures, arduous physical exertion and limited rehydration. These risk factors may result in acute kidney injury (AKI).

Methods We estimated incident AKI in a convenience sample of 283 agricultural workers based on elevations of serum creatinine between pre-and post-shift blood samples. Heat strain was assessed based on changes in core body temperature and heart rate. Volume depletion was assessed using changes in body mass over the work shift. Logistic regression models were used to estimate the associations of AKI with traditional risk factors (age, diabetes, hypertension and history of kidney disease) as well as with occupational risk factors (years in farm work, method of payment and farm task).

Results Thirty-five participants were characterised with incident AKI over the course of a work-shift (12.3 % 95% confidence interval [CI] 8.5% to 16.2%). Workers who experienced heat strain ($PSI \geq 7.5$) had increased adjusted odds of AKI (adjusted

odds ratio [AOR] 1.34, 95% CI: 1.04–1.74). Workers who were paid by the piece had AKI AOR of 4.24 (95% CI: 1.56–11.52).

Discussion Heat exposure and piece-rate work are associated with incident AKI after a single shift of agricultural work. Modifications to payment structures may help prevent AKI.

P078 EFFECT OF AIR POLLUTION ON THE NUMBER OF PATIENTS ADMITTED TO EMERGENCY ROOM DUE TO ASTHMA ATTACK

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Introduction WHO reported that seven million people died of

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between 20–69. Operational definition of asthma attack was J450, J459 (ICD-10) in the claims data either major or minor diseases during the research period admitted through the emergency room. Air pollution data (PM10, O3, NO2, SO2) was from the Korea Environment Agency. The lag-effects (0–5 day) were applied to estimate the RR and 95% CI: of daily number of patients associated with increasing quartile range of pollutants.

Results First, the number of patients admitted to emergency room by asthma attack during the study period was 701 (Ansan-si) and 634 (Ieu). Second, mean concentrations of pollutants

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well as the control of individual air pollutants, the management of mixed effects should be focused on, such as enforcement of total emission regulation for air pollutants.

P079 SCREENING OF PERSONAL TROPOSPHERIC OZONE EXPOSURE – AUTUMN AND SPRING (SCANIA, SWEDEN)

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Ozone is a strongly oxidising matter that might be abundant in the air we breath in concentrations that could harm living organisms. For humans ozone's toxicity is mainly concentrated to the lung and high levels can cause decreased lung function and irritation in the pulmonary system. There are also studies indicating that ozone might increase the effects of airborne allergens.