

Depending on the level of exposure, there is need to monitor and ensure adequacy of control measures in preventing ill health. This is done through medical surveillance programmes. It is not practical for Line Managers to memorise these programmes and comply with requirements. As a result, an automated web based system was developed to manage this.

Methods A system was developed to manage occupational health in a company with 120 employees. Consultations were done in the following departments to confirm occupational health roles and responsibilities: HR, SHEQ and Occupational Medicine. These departments had specific functions defined in the system.

Results 100% of employees were covered in the medical surveillance programmes and all were monitored on time. The system automatically tracked compliance of each employee and sent reminders to the employee, line manager or both at a predefined time. Medical records were kept for ever as compared to a defined number of years. Reports were automatically generated for the various user groups. None compliance was escalated automatically to senior management. Doctors had access to soft copy medical history, relevant records and occupational hazards per patient.

Conclusion The database was named OcHSol, meaning Occupational Health Solution. This system comprehensively manages occupational health. When using this system, employees are no longer missed for risk based medical surveillance. The database manages pre-employment, periodic, pre-placement, post incident and exit medical examinations.

945 INFLUENCE OF INDUSTRIAL SAFETY SHOE CHARACTERISTICS ON POSTURAL STABILITY

¹V Chorsiya*, ²PK Nag, ³P Dutta, ⁴A Nag. ¹Manav Rachna International University, Faridabad, India; ²Rama Krishna Mission Vivekananda University, Kolkata, India; ³Indian Institute of Public Health-Gandhinagar, India; ⁴National Institute of Occupational Health, Ahmedabad, India

10.1136/oemed-2018-ICOHabstracts.910

Introduction Working conditions, such as walking and standing on hard surfaces, can increase the development of musculoskeletal complaints. At the interface between flooring and musculoskeletal system, safety shoes may play an important role in the well-being of employees. Slip, Trip and fall accidents in the industrial setting range from trivial falls to life-threatening fatalities and injuries which could be as a compromised of postural stability. Safety shoe has different characteristic features but in what way these characteristics interact with each other and influence postural stability is uncertain. The study elucidates the influence of industrial safety shoes characteristic on different stabilometric dimensions that are the indicators of postural stability. The purpose of the current study effect is to explore the contribution of specific characteristics of safety shoe used in industries along with the individual characteristics in Static and dynamic postural conditions.

Methods Twenty-five male subjects performed the task of standing and walking on the piezoelectric force platform (Kistler, Switzerland, model 9268AA) with industrial safety footwear and centre of pressure displacements parameters were investigated as measures of postural stability.

Results Multiple ANOVA results showed the significant influence of shoe characteristics (toe cap, sole of shoe, weight of the shoe and ankle type) and their interaction on the centre of pressure displacement determinants.

Conclusion The role of individual characteristics preponderate the impact of safety shoe characteristics on postural stability. This work gives a valuable insight to consideration of footwear characteristics for manufacturers and employers to put a check on Slip, Trip and Fall injuries which can improve the productive life of labour with more work efficiency.

97 HEALTH PROBLEM OF INDIAN FARMERS DUE TO EXCESSIVE HEAT EXPOSURE AND PREVENTIVE MEASURES

¹K Kesanwani*, ²P Sharma. ¹PhD Scholar, G.B. Pant University of Agriculture and Technology, Pantnagar, India; ²Professor, G.B. Pant University of Agriculture and Technology, Pantnagar, India

10.1136/oemed-2018-ICOHabstracts.911

Introduction India is primarily an agrarian economy as farming is one of the most important occupations in country. However numbers of studies have classified farming as a risky and hazardous job because of the nature of farm work. Farm workers are particularly at higher risk of developing health problems. The drastic change in the world wide climate has created too much problems among farmers. Most of farm operations in India are still accomplished manually under direct sunshine. These entire factors, makes farm operation quite dangerous. The exposure to hot occupational environment remains a persistent impediment to improve productivity and problems affecting health. Health problems that result from heat stress are known as heat disorders.

Methods The study was undertaken to find out the health problems experienced by farmers and to design, develop and disseminate PPE to safe guard farmers from the impact of excessive heat.

Results It was revealed that majority of farmers were working for more than 7 hours in squatting and bending position under direct sunshine which was promoting heat disorders resulting from heavy physical work leading to loss of fluid and salt resulting in heat cramp, heat exhaustion, etc.,. Prevalence of above factors is more common among farmers due to unawareness and lack of knowledge about associated heat exposure risks, leading to poor adaption of preventive and protective measures. Further, incidence of MSDs among the farmers was reported by majority. The long working hours and posture adopted resulted more in body pain/discomfort. While disseminating the PPE, the acceptability among the farm workers was reported to be very high.

Conclusion The pace with which global average temperature is rising, there arise a need to protect the outdoor workers from heat-related illnesses. Creating awareness and developing of PPE to safeguard has now become a matter of concern worldwide.

976 PROFILE OF ILLNESS AMONG WORKERS OF A UNIVERSITY CAMPUS IN THE STATE OF SÃO PAULO: ANALYSIS OF ILLNESS-RELATED ABSENTEEISM

Miriam Malacze Fantazia, João Marcos Bernardes, Adriano Dias*. Botucatu Medical School/ UNESP, Botucatu, Brazil

10.1136/oemed-2018-ICOHabstracts.912

Introduction Brazilian public institutions have been passing through changes since the 90 s. These changes have included new management and work organisation methods that entail

better productivity, faster work pace, employee downsizing, temporary contracts and outsourcing among others. As a result, the rates of physical and mental illness among public servants have increased. Thus, the objective of this study was to establish the profile of illness-related absence, defined as time off from work due to illness certified by a physician, among workers of a Brazilian state public university in the year of 2012.

Methods In this cross-sectional study, secondary data were extracted from the institution's occupational medical examination systems and medical reports. Results have been reported as simple and cumulative frequencies, while associations were estimated by chi-square tests, and distribution differences determined by post-hoc Z tests with Bonferroni's correction coefficient.

Result During the study period, 538 workers were on sick leave. These consisted of married females aged over 41 years. Most of them had been working on the university's hospital for 11–30 years, holding intermediate level nursing positions, and had taken one sick leave. Of these, 11% undertook some sort of work readaptation. The most frequent causes for sick leaves, which lasted for up to 15 days, were mental/behavioural disorders, and osteomuscular and connective tissue diseases. Statistical analysis demonstrated that some sociodemographic characteristics, such as sex and age, and job characteristics, such as work unit and position, influenced the development of illness, which in turn influenced sick leave duration and work readaptation conditions.

Discussion Our results present the magnitude of the problem that illness-related absenteeism is to the public sector and can assist in planning preventive actions, prioritising the most vulnerable occupational groups.

Occupational Health for Health Care Workers

1013

OCCUPATIONAL TUBERCULOSIS IN SOUTH AFRICA: ARE HEALTHCARE WORKERS ADEQUATELY PROTECTED?

¹MM Malotle, ²J Spiegel, ²L O'Hara, ²P Adu, ²A Yassi, ^{1,3}M Zungu, ⁴E Bryce. ¹National Institute for Occupational Health, National Health Laboratory Services, Johannesburg, South Africa; ²School of Population and Public Health, University of British Columbia; ³University of Pretoria, School of Health Systems and Public Health, Pretoria, South Africa; ⁴Department of Pathology and Laboratory Medicine, University of British Columbia

10.1136/oemed-2018-ICOHabstracts.913

Introduction Effective tuberculosis (TB) infection prevention and control (IPC) measures including education and training are crucial in limiting the spread of TB in healthcare settings. We aimed to explore how well HCWs adhere to TB IPC practices, the nature and extent of training related to TB IPC across demographic and occupational factors.

Method An interviewer-driven structured survey was conducted among HCWs in a provincial tertiary hospital in Gauteng Province, South Africa. Data were analysed using SPSS version 24. Pearson's Chi Square test or Fisher's exact tests checked differences between categorical variables; logistic regression assessed associations between covariates.

Results Of the 285 HCWs surveyed, only 43% reported having received training on TB transmission, signs and symptoms; 29.8% of nurses had been trained on the proper use of N95 respirators; only 5% of support workers were trained on

mode of transmission; and only 37.2% of all HCWs were aware of a protocol for managing TB patients. Only 56.3% of nurses and 66.7% of doctors reported they always or sometimes wore respirators when managing suspected or confirmed TB cases, although 70.5% of the nurses and 86.7% of the doctors reported that these personal protective equipments were not readily available. Importantly, non-clinical (support) HCWs were more than 7 times more likely to use respirators if trained on their proper use.

Discussion Major gaps persist in both availability of respirators and training of HCWs on TB transmission, both factors highly associated with lack of adherence to TB IPC. To protect HCWs, hospital management should ensure availability of respirators as well as effective trainings for all job categories, with particular attention to support staff, who seem to be particularly poorly trained and at high risk of TB.

1055

SCREENING FOR LATENT TUBERCULOSIS INFECTION IN HEALTH CARE WORKERS: TUBERCULIN SKIN TEST OR INTERFERON GAMMA RELEASE ASSAY?

¹Shahieda Adams, ¹Rodney Ehrlich, ²Roslynn Baatjies, ³Keertan Dheda. ¹Affiliation University of Cape Town, School of Public Health and Family Medicine, Cape Town, RSA; ²Cape Peninsula University of Technology, Cape Town, RSA; ³University of Cape Town, Department of Medicine, Lung Infection and Immunity Unit, Cape Town, RSA

10.1136/oemed-2018-ICOHabstracts.914

Introduction Screening for latent tuberculosis infection was conducted among 505 health care workers in a high TB incidence country in Sub-Saharan Africa. The study assessed the level of agreement between TST and IGRA, identified factors associated with discordance between test results and compared sensitivity and specificity of the tests using a latent class model.

Methods Three tests for TB infection were employed: Tuberculin skin test, Quantiferon-gold-in-tube and TSPOT.TB. Agreement was measured between test outcomes. Factors associated with discordance were analysed using a multinomial logistic regression model. Latent class analysis using a fixed effects model that allowed for conditional dependence between QFT-GIT and TSPOT.TB was used to fit the data and allow for a direct comparison of test sensitivity and specificity.

Result There was fair agreement between TST and QFT – GIT ($\kappa=0.28$) and T-SPOT.TB ($\kappa=0.25$), respectively. Marked discordance was noted between the TST and IGRA results in HIV positive individuals OR: 6.35, those who reported previous TB treatment OR: 3.00 or were symptom screen positive for TB, OR: 2.95. TST had the highest sensitivity (93%) and lowest specificity (55%) of the three tests. IGRAs displayed equivalent sensitivity (79%–84%) and higher specificity (94%–97%) with marginal change following the application of a latent class model.

Discussion Marked discordance between TST and TSPOT.TB outcomes in HIV infected individuals reflects potentially greater sensitivity of this assay in immunocompromised persons. In high TB incidence settings IGRA assays do not display significantly greater sensitivity or specificity in diagnosis of LTBI among health care workers following the application of latent class analysis model that allows for conditional dependency between IGRAs.