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spring, with odd ratio 1.45(p<0.001), 1.2(p=0.03), 1.16(p=0.08), accordingly. Compared to spring-summer, fall-winter poses higher risk (OR 1.2, p<0.0001) to get AD.

Conclusions: There exists a seasonal variation of AD risk in Taiwan’s infants at 6 months old. Indoor molds contribute to the different distribution of month of births within AD children.

OT24-3
Compliance of Universal Precautions by Emergency Surgical Health Care Workers; A Sri Lankan Experience
Manor Lakeruwan Dassanayake1, Ayanthi Karunarathne
1. Post Graduate Institute of Science, Sri Lanka
2. Ministry of Health Care and Nutrition, Sri Lanka
3. Teaching Hospital Anuradhapura, Sri Lanka

Health care workers in emergency surgical units (ESHCW) are considered as a high risk category of acquiring infections by infectious blood and body fluids. Universal precautions (UP) are recommended to minimize this risk. Objective of this study was to understand the current compliance level of ESHCW with UP and identify factors affect the compliance. First 15 minute management of the first victim in 29 consecutive casualty incidents brought to Teaching Hospital Anuradhapura in 2009 was observed. Total encounters between ESHCW and patients were 359. UP were breached in 1033 occasions with average 2.87 per encounter. Average break rate was 2.91 in doctors. It is 2.78 and 2.93 among nurses and orderlies respectively. The lowest break rate was seen in senior residents and highest in interns. There is a significant reduction in breaking UP with increasing severity of incident (Pearson correlation -0.797, P=0.205) Wearing gloves were seen in 12.18%. Aprons were used by 4.45%. 22.84% of ESHCW remained at bed side without an apparent role. 82.17% attended other victims without hand washing or changing gloves. Compliance of the EHCW with UP remain low in the study population. Increasing the severity of incident reduce the non compliance significantly which is opposite of the general belief. Wearing apron is significantly lower than wearing gloves. Approximately 1/5 of the EHCW remain at bed side unnecessarily. Every 4/5 EHCWs attend other patients without hand washing or changing the gloves which can be a mode of transmitting infections between trauma victims.

Introduction: Burnout, which comprises a syndrome of emotional exhaustion, depersonalization and a sense of low personal accomplishment is an important negative outcome of chronic occupational stress. Information on correlates of burnout among Sri Lankan nursing officers (NO) is vital to initiate preventive measures.

Objectives: To describe work life correlates of burnout among NOs working in teaching hospitals in Colombo.

Methodology: A descriptive cross sectional study was conducted in six teaching hospitals in Colombo among a stratified cluster sample of 1356 nurses. A self-administered questionnaire with questions assessing work life correlates (identified through a literature survey and key-informant interviews) and validated Sinhala version of Maslach Burnout Inventory–Human Services Survey (MBI-HSS) was used. Burnout status was determined using validated cut off values for the total score of MBI-HSS.

Results: Response rate was 90.4% (n=1356) and prevalence of burnout was 27.9%. In multivariate analysis, work life correlates explained 42.6% of variance of burnout. Shorter nursing experience of <5yrs (OR=5.6), high work demands (OR=2.6), low work resources(OR=2.4), poor physical work environment (OR=1.7), low work satisfaction (OR=2.2), working in pediatric units (OR=3.1), working in OPD/other units (OR=1.6), shiftwork (OR=2.1) and difficulty with shiftwork (OR=5.1) were significant predictors of burnout.

Conclusions: Several correlates in the NOs’ worklife contribute to burnout and minimizing these could be an important strategy in prevention.

OT24-5
Relationship between Drinking Water and Blood Arsenic Level and Skin Lesions in Buyat Village North Sulawesi Indonesia
Anwar Daidul, Nur Noor1, H.J. Makono2, Muhammad Amiruddin1
1. Hasanuddin University, Indonesia
2. Airlangga University, Indonesia

Arsenic contamination of groundwater is a severe public health crisis in Buyat Village Kutabunan Sub-district, Bolaang Mongondow Regency, North Sulawesi Province Indonesia, where the population is exposed to arsenic in drinking water through tube wells used for groundwater collection. In this study, explored the relationship between drinking water and blood arsenic levels with skin lesions on Buyat Communities. The research used of baseline data from subject 108, which as 54 case and 54 control who were recruited into the Health Effects (Skin lesions such as Keratosis, and hyperkeratosis). This study was Case control study on the health effects of arsenic exposure from drinking water in Buyat Village. We conducted analyses with Chi-Square and Odd Ratio. We found a strong dose–response association with all measures of arsenic exposure in drinking water and skin lesions. Arsenic levels in drinking water from tube well
of Buyut Village was about 0.01-0.104 mg/L (average 0.056 mg/L). A significance was observed between in drinking water and blood arsenic levels with p=0.000 (Odd Ratio = 19.44 95% CI: 6.52-58.00), blood arsenic levels and skin lesions with p=0.000 (Odd Ratio = 15.63, 95% CI: 4.94-49.40). Our study provides insight into potentially modifiable host characteristics and identifies factors that may effectively target susceptible population subgroups for appropriate interventions.

OT24-6
Development of Wet & Bulb Globe Temperature (WBGT) Index Formula and Determination of Heat Strain Indicator for Worker Exposed by Heat Stress
Denny Dennyo Ardiyanto
Airlangga University, Indonesia

The objectives of the research were to determine heat strain indicator other than core temperature and to discover mathematical formula which could develop new indicator of WBGT Index and threshold limit value being appropriate for workers in Indonesia. The research was conducted in glass, steel, and home industries whose sample size were 122 workers. Workers who experienced heat strain were 26 persons (21.3%). Analysis showed that beside core temperature, pulse could be used as an indicator of heat strain. Its critical point was 7 pulses/minute if baseline pulse was known, and critical point was 105 pulses/minute. Based on confirmatory analysis, mathematical formula for WBGT index was got. The formula was (0.32 x wet temperature) + (0.37 x dry temperature) + (0.31 x globe temperature). Based on regression analysis was derived threshold limit value of developed WBGT index was 37.1°C. However, the value of former WBGT Index was 33.3°C. If wind velocity was performed using logistic regression. There was significant difference before groups for age, sex, education and occupation p<0.05. In the others, there were significant differences between case and control groups for arsenic levels in rice (0.61±0.27 vs. 0.34±0.12 mg/L, p=0.00), drinking water (0.04±0.03 vs. 0.01±0.01 mg/L, p=0.00), urine (0.13±0.15 vs. 0.00±0.01 mg/L, p=0.00) and blood (0.99±0.08 vs. 0.02±0.03 mg/L, p=0.00). Analyses with logistic regression showed that arsenic levels in rice, drinking water, urine and blood associated with skin lesions, respectively OR=4.14, (95%CI, 1.18-14.51), OR=36.79 (95% CI, 10.44-129.66), OR=5.94 (95%CI, 1.6-21.53), and OR=10.53 (95%CI, 2.66-41.75). We conclude that arsenic levels in rice, drinking water, urinary and blood were risk factors to skin lesions.

OT24-7
Arsenic Levels Exposure as Risk Factors to Skin Lesions at Peoples in North Sulawesi
Daud Anwar1, Nur Nasry Noor2, HJ Mukono3, Muh. Dali Amiruddin1, Veni Hadji1
1. Hasanuddin University, Indonesia
2. Airlangga University, Indonesia

Arsenic exposure can generate various skin lesions such as keratosis, hyperkeratosis, hyperpigmentation, hypopigmentation, and skin cancer. This study was intended to examine risk factors of rice, drinking water, urinary, and blood arsenic levels to skin lesions at peoples in North Sulawesi. This was a case control study whereas cases (n=54) were people suffering for skin lesion (keratosis or hyperkeratosis) living in Buyut Village (exposure areas) and controls (n=54) were normal people who were living in Buku Village (non exposure areas). Inclusion criteria was age more than 10 years and living at the areas more than 7 years. Arsenic levels was analyzed using AAS-GF while skin lesion diagnosed by a dermatologist. Data analysis was performed using logistic regression. There was significant difference before groups for age, sex, education and occupation p<0.05. In the others, there were significant differences between case and control groups for arsenic levels in rice (0.61±0.27 vs. 0.34±0.12 mg/L, p=0.00), drinking water (0.04±0.03 vs. 0.01±0.01 mg/L, p=0.00), urine (0.13±0.15 vs. 0.00±0.01 mg/L, p=0.00) and blood (0.99±0.08 vs. 0.02±0.03 mg/L, p=0.00). Analyses with logistic regression showed that arsenic levels in rice, drinking water, urine and blood associated with skin lesions, respectively OR=4.14, (95%CI, 1.18-14.51), OR=36.79 (95% CI, 10.44-129.66), OR=5.94 (95%CI, 1.6-21.53), and OR=10.53 (95%CI, 2.66-41.75). We conclude that arsenic levels in rice, drinking water, urinary and blood were risk factors to skin lesions.

OT25-1
Associated Sociodemographic and Employment Characteristics with Return to Work Following Injury
Azlan Darus1, Retneswari Masilamani2, Victor Ho3, Hity Moe3, Zakiah Said4
1. University of Malaya, Malaysia
2. Ministry of Health, Malaysia

Background: Return to work following injury is an important end result of treatment and rehabilitation among workers who are injured. Apart from the nature of injury, other factors such as employment characteristics, social and demographic factors were found to affect return to work.

Aim: To determine the prevalence and factors associated with return to work among patients following long bone fractures of the lower limbs.

Method: A cohort of patients who sustained long bone fracture of the lower limbs during the period of 24 months – 1st August 2004 to 31st July 2006 was identified from a teaching hospital in Kuala Lumpur. Subjects were identified through medical record registry and eligible patients were then contacted by phone. Subjects were followed up at 3, 6, 9 and 12 months post injury and stopped if a patient had returned to work or if 12 months had past since the onset of injury. Results: One hundred eighty and five (185) subjects were recruited. Of these 166 (89%) had returned to work within one year. Return to work period was found to be significantly associated with gender, type of occupation and presence of compensation.

Conclusion: Return to work is associated with factors other than the injury itself, such as compensation issues, occupation type and gender. Looking at these factors may improve communication between caregiver, employer and patients to encourage safe earlier return to work for the benefit of all.
complained and the main problems were air pollution (86.6%). The concentrations of Benzene, Toluene, Xylene and Ethylbenzene in the nearby communities were in the ranges of $<0.001-1.097$ ppm, $<0.001-1.182$ ppm, $<0.001-2.385$ ppm and $<0.001-0.045$ ppm, respectively. The concentrations of concerned VOCs in the nearby communities (within 10 meters) were related to the concentrations of VOCs in the garages with the correlation coefficients of 0.64, 0.49, 0.40, and 0.22 for Toluene, Benzene, Xylene and Ethylbenzene, respectively. The concentrations measured in the nearby communities were compared to the order threshold limit, the results indicated that all concentrations were not exceeded the order threshold. However, there were many factors related to the measured VOCs concentration.

**OT26-1**

**Association between Arsenic Level in Drinking Water with Skin Disorders in Buyat Village North Sulawesi Indonesia**

Anwar Buyat Daoud, Nur Nasri, H.J.Mukono
1. Hasanuddin University, Indonesia
2. UNHAS, Indonesia
3. UNAIR, Indonesia

Objectives: Arsenic contamination of groundwater is a severe public health crisis in Buyat Village Kotabunai Sub-district, Bolaang Mongondow Regency, North Sulawesi Province Indonesia, where the population is exposed to arsenic in drinking water through tube wells used for groundwater collection. In this study, we explored the association between Arsenic levels in drinking water with skin disorders on Buyat Communities.

Methods: We used baseline data from subject 86, which as 43 case and 43 control who were recruited into the Health Effects (Skin disorders). This study was Case control study on the health effects of arsenic exposure from drinking water in Buyat Village. We conducted analyses with Chi-Square and Odd Ratio.

Results: We found a strong dose–response association with all measures of arsenic exposure in drinking water and skin lesions. Arsenic levels in drinking water from tube well of Buyat Village was about 0.01-0.10 mg/L (average 0.056 mg/L). A significance was observed between Arsenic levels in drinking water and skin disorders with p=0.017 (Odd Ratio = 2.87, 95% CI: 1.19-4.6934).

Conclusions: Our study provides insight into potentially modifiable host characteristics and identifies factors that may effectively target susceptible population subgroups for appropriate interventions.

**OT26-2**

**Special Subject of Assessing the Environmental Burden of Disease and Economic Lost in Vietnam in 2008**

Minh Loc Nguyen, Tri Thanh Nguyen

Vietnam Environment Administration, Vietnam

Vietnam is one of developing countries in Asia area that be worst sustainable development of environment because of rapid process of urbanization and industrialization. This special subject is in framework of project named “Investigating, statistic and assessing the effect of polluted environment on community health and proposing solutions aim to reduce pollution and recommend to public in 2008” by the Vietnam Environment Administration. Materials and methods: Using industrial pollution projection system (IPPS) developed by the World Bank, method of assessing the Environmental Burden of Disease (EBD) and economic lost caused by polluted environment developed by WHO. Results: The indicator of EBD from unsafe water, sanitation and hygiene in provinces in the Mekong River Delta and South East area is higher than the others, while result of assessing the EBD from indoor air pollution in North East area is highest in nationwide. In 2007, on averaged 1000 people in North East, it would be losted 20 years of healthy life due to premature mortality and time lived in states of less than full health caused by indoor air pollution, is double the whole country average. The EBD indicator from developed industrialization provinces such as HaTay, HaiPhong, DongNai, BinhDuong, DaNang... is higher than from underdeveloped provinces. An outstanding point is although the EBD indicator from unsafe water, sanitation and hygiene make up very limited percentage of total EBD from three polluted environment factors (approximately 1%), the economic lost caused by them is quite high percentage, about 46% of total lost of nation.

**OT26-3**

**Stress and Satisfaction among Healthcare Professionals: A Survey Finding**

Wah Yun Low, Chirk Jen Ng, Kwang Hwee Goh

University of Malaya, Malaysia

This cross-sectional postal survey examined stress among doctors in a teaching hospital at the University of Malaya Medical Center, Kuala Lumpur, Malaysia. The Pressure Management Indicator (PMI) was utilized in the study. This 120-item self-report questionnaire measures job satisfaction, mental and physical health, pressure, individual differences, coping, and social support based on a 6-point Likert scale. The higher the score, the higher the satisfaction or stress. Some 220 (47.3% response rate) doctors participated, consisting of 36 consultants (16.4%), 41 lecturers and trainees (18.6%), 90 medical officers (41%), and 53 house officers (24%). Significant differences were shown between the various groups in terms of job satisfaction (p=0.001).