

Abstracts

commune we propose and evaluate improvements to the current system for tracking work-related injuries. We evaluate both passive and active approaches for capture sensitivity and the potential for collecting information on industries, occupations and populations at risk, injury types, causes, severity and burden.

Results Currently the Ministry of Health in Vietnam collects and publishes statistics on non-fatal injuries using hospital admission reports. A passive surveillance model which builds on the current system, but adds case reports for individuals treated at the commune health stations (CHS) and includes data from a newly designed additional injury log, would improve the capture of injuries and allow identification of occupations and populations at risk. However, with passive reporting the completion rate, accuracy and validity of the information collected are likely to be compromised. An active surveillance model, structurally similar to the passive approach, but gathering timely reports of injuries and including follow-up of injured individuals, would provide greater sensitivity of capture and case detail, while requiring significant resources. Active reporting in the Xuan Tien commune found counts of work-related injuries approximately 24 times higher than reported previously.

Conclusions We recommend that an extended passive surveillance approach be adopted in Vietnam to include hospital and community health station reporting. As health authorities become aware of counts or rates in specific communities which contribute disproportionately to the national burden, active surveillance in those communities might become a valuable extension to national surveillance.

71 SNAKE BITE ENVENOMATION IN SAN, MALI

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Objectives Envenoming resulting from snake bites is a serious public health problem in many regions of the world. The aim of this study is to describe the difficulties in the management of envenomation in the prefecture of San in Mali.

Methods A retrospective study of snake bites cases, recorded in the Health Reference Center of San (Ségou region) in 2001–2003, was conducted.

Results During the period of study, 88 victims were received and treated at the Health Reference Center of San. Of these, 42% were farmers and 6,8% shepherds. Adults 15 years and over were most commonly concerned because of their socio-professional activities (cattle breeding, gathering [3DOTS]). The majority (50,6% of reported cases) were occurred during field-work, 24,7% during nature walks and 9,4% during picking. Snakes belong to the Viperidae family (*Bitis arietans*, *Echis ocellatus*) and the Elapidae family (*Naja nigricolis*). In 50,6% of cases, the bite was on the lower limb, 48,2% on the upper limb and 1,2% on the trunk. According to data available, 28,4% of envenomated patients have benefited from antivenom administered intravenously. The average length of stay in hospital was 3 days, with a range of 12 hours to 11 days. Among the 29 cases for whom the evolution is known, 7 of them died. For other cases, the outcome was favourable with or without sequelae.

Conclusions Concerted action is needed to ensure adequate supplies of effective antivenom to develop systems that deliver high quality health care.

72 MENTAL OUTCOME OF WORKERS 12 MONTHS AFTER OCCUPATIONAL INJURY

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Objectives Workers hospitalised after occupational injury are at risk for psychiatric disorders. This study aimed to examine prevalence rates of both post-traumatic stress disorder (PTSD) and major depression at 12 months in workers experiencing different types of occupational injury in Taiwan.

Methods Workers sustaining occupational injury and hospitalised for 3 days or longer and received hospitalisation benefits from the Labour Insurance program were recruited in this study. A two-staged survey study was conducted. A self-reported questionnaire including the Brief Symptom Rating Scale (BSRS-50) and Post-traumatic Symptom Checklist (PTSC) was sent to workers at 12 months after injury. Those who scored high and suspected to have mental conditions were recruited for the second stage phone interview with a psychiatrist using the Mini-international Neuropsychiatric Interview (MINI).

Results A total of 1233 workers completed the questionnaire. Among them, 167 (13.5%) scored high in either BSRS or PTSC and were invited for the MINI interview. A total of 106 (63.5%) completed the phone interview. The estimated rates of PTSD, partial PTSD (PPTSD), major depression, comorbid PTSD/PPTSD and major depression, and either PTSD/PPTSD or major depression were 3.4%, 1.8%, 2.0%, 2.0%, and 5.2%, respectively. The risk factors for high scores in either BSRS or PTSC were gender, education level, marriage status, loss of consciousness after occupational injury, injury affecting physical appearance, occupational injury experience before this event, traumatic life events before and after this injury, length of hospital stay, self-rated injury severity, and the worker's proportion of income contribution to the family.

Conclusions Occupational injury can cause long-term mental condition in the workers. The identified risk factors in this study may provide valuable information for developing preventive strategies.

73 TARGETING PREVENTION POLICIES AND PRIORITIES FROM USING ROUTINE OCCUPATIONAL INJURIES STATISTICS; ARGENTINA, 2012

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Objective To identify from routine collected data in National worker's compensation database, sectors of the economy where workers are exposed to different risk levels, and to rank and prioritise groups to apply measures based on seriousness and coverage.

Methods we determine statistic quintiles of frequency rates indicators and the extent of their severity based on ILO proposed statistics to assess rates by the top 17 sectors of the economy to the entire worker population during the 2009–2011 time period. We calculate injury, mortality and lethality rates observing lower and upper limits across three year's time-trends. We identify sectors that persist the period at top and give a score value to be rank.

Results The impact rate shows severe seriousness for the highest injury rate quintile, which bears 5.61 times the lowest risk quintile, and its economic activities have 3 times more risk of suffering injuries compared with the rest. Time trend indicates that the number of workers exposed to it decreases by 10% in 2011. 43% of workers are included in the last but one quintile of mortality. The highest lethality risk quintile and the second next concentrate more than 55% of workers. We identified 10, 8 and 5 every 17 economic activities that respectively persist within the worst injury, mortality and lethality risk in the period analysed. Eight sectors are repeated in at least 2 of those rates. By the score method, we found the same results.

Conclusion This paper emphasises the importance and potential of routine statistics use in all areas of occupational safety and health research to increase their scope and effectiveness, and the identification and implementation of preventive measures from a simple, current, reliable and easy to use method for more inclusive public health policies.

74 DOES WORK RELATEDNESS OF AN INJURY INFLUENCE TIME ON DISABILITY BENEFITS IN BRAZIL, A COHORT STUDY

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Objectives Evidence on predictors of time on benefits is mainly from developed countries. Evidence from emerging economies is lacking. In this cohort study predictors for time on disability benefits were identified within a Brazilian workers compensation insurance. Workers can claim benefits for either work related or work relevant conditions. This provided us with the unique opportunity to examine the role of work relatedness of back pain on time on benefits

Methods In 2008, 83,114 workers diagnosed with back pain were claiming benefits. Claimants had > 15 days away from work. The analysis was adjusted for sex, age (/ 10 year), back pain benefits in 2007, claim rate of the industrial sector in 2007, and ICD-10 diagnosis (as agreed by two physicians). Duration of follow up was 52 weeks. Predictors for time on benefits in the first episode were identified by means of Cox regression analysis. Explained variance and c-statistic were calculated.

Results Median time on benefits was 55 days (Inter Quartile Range (IQR) = 33–86). 1.49% of workers was on benefits after 52 weeks. Work relatedness of the claim was associated with the outcome: those with a non work related claim returned to work 1.04 times faster compared to those with a work related condition. Only age and diagnosis had hazard rate ratios over 1.2. Explained variance of the model was 3% (c-statistic<0.6).

Conclusions Work relatedness is weakly associated with the outcome. The factors in this database have little explanatory power. More information on factors like: functional status, pain, recovery expectations, availability of workplace accommodations, physical demands and health care use might result in prediction

that has utility in risk stratification an referral to early and appropriate intervention. In large administrative databases, statistical significance is easily attained therefore relevance criteria should be given and model fit should always be reported.

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75 PULMONARY FUNCTION IMPAIRMENT AMONG HOSPITAL SANITARY WORKERS

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Objective To assess pulmonary function and symptoms among the hospital sanitary workers.

Methods A cross sectional comparative study was conducted to compare the pulmonary function among 44 sanitary workers [exposed group] as compared to 57 workers of the administrative departments [un-exposed group] at the general public hospital. An interview questionnaire was introduced to all study participants to obtain demographic data, respiratory symptoms, and smoking history. The pulmonary function parameters; Forced Vital Capacity [FVC], Forced Expiratory Volume in 1 second [FEV₁], and Forced Expiratory Flow [FEF_{25–75}] and Peak Expiratory Flow [PEF] were determined according to the American Thoracic Society criteria. The difference between variables of the two groups was done using Independent t-Test and Chi-Square test for quantitative and qualitative variables respectively. Statistical significance was set at (p < 0.05).

Results The mean age was 41.3 ± 6.7, and 41.2 ± 7.2 among the sanitary workers and the un-exposed workers of administrative departments (p = 0.471). Sixteen sanitary workers were smokers (36.4%), while 21.1% of administrative workers were smokers with no statistically significant difference between the two groups (p = 0.088). Sanitary workers had more complaints of productive cough (27.2%) as compared to 15.7% of the un-exposed group (p = 0.158). Among sanitary workers 33% reported wheezing and 24% dyspnea. These symptoms were higher in the exposed group compared to the un-exposed group (p = 0.031 and p = 0.011 respectively). Among the sanitary workers, the mean [predicted values] of FEV₁/FVC, PEF and FEF_{25–75} were lower than the un-exposed group with statistically significant difference (p = 0.0001, p = 0.0001 and p = 0.0006 respectively). **Conclusions** Employment in hospital sanitary service was found to be associated with increased respiratory symptoms and decline in some of the pulmonary function parameters. Further research is needed to identify the specific exposures and work tasks responsible for increased respiratory symptoms and nature of pulmonary dysfunction in sanitary/cleaning workers in hospitals.

76 INVESTIGATION OF THE CORRELATION BETWEEN VARIOUS AIR POLLUTION METRICS AND EFFECTS ON ASTHMA; A TIME SERIES STUDY IN SOUTHERN SWEDEN

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Introduction Different metrics of daily levels of particulate matter were used to study the association between air pollution and