

Local hazards to cross-reference against key areas of organisational risk.

Evidence for policy or strategy development/recombination of corrective actions.

Analysis Cluster Diagrams for Musculoskeletal injury, Mental Stress and Challenging Behaviour incidents.

Learning outcomes Understanding of qualitative analysis for strategy development.

Identifying multi-hazard interaction and associations.

Appreciation for a visual representation of hazard identification when developing in the risk-management strategy.

3F.002 RISK ASSESSMENTS – VALUABLE TOOL OR AN EXERCISE IN FUTILITY

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The question that is posed by this presentation is whether or not risk assessments are a valuable tool or an exercise in futility. Organisations are faced with a conundrum, as WHS/OHS Legislation identifies that employers must ensure the health and safety of people 'so far as reasonably practicable This is done by identifying the hazard and controlling the risk.

But regulators state that the 'method does not require elaborate systems or large amounts of paper to support it. How the method is put into action depends on the complexity of the hazards or risks, the nature of the organisation and how its business is conducted.

What happens if the risk assessment is wrong? Who is qualified to prepare a risk assessment? Assessing risk is not an exact science. It relies on knowledge, experience and an understanding of chemicals, processes and human behaviour. What one person considers as a risk another may not. This presentation also poses the question of whether or not having a poorly prepared risk assessment is better than having no risk assessment. Using case studies this presentation will examine the advantages and disadvantages of proprietary risk assessments along with other issues that are that seemed to have become urban myths when completing risk assessments.

3F.003 SAFETY DATA SHEETS EXPOSED; THE IMPLICATIONS OF POOR AND INACCURATE SDS

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Safety data sheets contain critical information for the safe use, handling, storage, transportation and disposal of chemicals. SDS's provide essential information for the production of risk assessments. The reliance of such documents by occupational health and safety professionals, chemists, and students is massive.

As health and safety professionals it is important to understand that all safety data sheets are not necessarily equal. But how do you know if the information contained on the SDS is accurate? What are the implications/ramifications of having an inaccurate data and information of the SDS?

This is paper is a case study surrounding the purchase of a pack of irritant smoke tubes used for the testing of fume cupboards, and the ongoing narrative which occurred when an importing supplier was asked for an Australian GHS Compliant safety data sheet.

This presentation also looks at the implications of a poorly written SDS and the possible consequences of an inaccurate information, as well as raising questions about the use of third party SDS and who can be considered as a 'subject matter expert'.

3F.004 OCCUPATIONAL HEAT STRESS AND ECONOMIC BURDEN: EVIDENCE FOR WORKPLACE HEAT MANAGEMENT POLICIES

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Background The adverse effects of heat on workers' health and work productivity are well documented. However, the resultant economic consequences are less understood. This review aims to summarise the retrospective and future economic burden of workplace heat exposure.

Methods Literature was searched from database inception to August 2019 using PubMed, Scopus and Embase. Papers were limited to original human studies investigating costs from occupational heat stress.

Results This review included 14 studies. 12 studies estimated costs secondary to decreased labour productivity. Predicted global costs from lost worktime were \$US 311 billion in 2010 ($\approx 0.5\%$ of GDP), \$2.5 trillion in 2030 ($>1\%$ of GDP) and up to 4.0% of GDP by 2100, with additional expenses after considering decreased work efficiency. Three studies estimated healthcare expenses from occupational illnesses/injuries due to heat with averaged annual costs exceeding \$1 million in Spain and Guangzhou and \$250,000 in Adelaide. Developing countries and countries with warmer climates had greater GDP losses. Some studies investigated and observed greater costs per worker in outdoor industries, amongst males, those aged 25 to 44, and medium-sized businesses.

Conclusions Estimated global expenses are substantial.

Climate change mitigation and adaption can minimise most future costs. Further research exploring the relationship between occupational heat stress and costs, expenses from decreased work efficiency and healthcare, and costs stratified by demographics factors is warranted.

Learning Outcomes Analysing heat-attributable occupational costs may guide the development of workplace heat management policies and global warming strategies. Responding to climate change is crucial to minimise future economic burden

3F.005 THE EPIDEMIOLOGY OF HOME AND WORKPLACE INJURIES IN NEPAL: A HOUSEHOLD SURVEY

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Background Unintentional Injuries comprise the fifth leading cause of death in Nepal in 2017, an increase of 23% compared to 1990. In Nepal, there is minimal community-derived evidence of home or occupational injuries. Our aim was to describe the epidemiology of injuries in the Makwanpur district, including the causes and risk factors associated with those injuries.

Methods A cross-sectional, household survey was undertaken in three administrative areas of Nepal between April-June, 2019. Data were collected electronically about non-fatal and fatal injuries in the previous three months and five years, respectively.

Results 17,593 individuals from 3,327 households were surveyed; 394 people were injured. 136/394 (34.5%) injuries occurred in homes, 109 (27.7%) were work-related. 225 (55.8%) were males, the age range was 0–87 years, 123 (30.7%) were child injuries, (0–17 yrs). The most commonly reported injury was falls (n=173, 43.9%), stumbling and tripping were the most common reasons and 73 (42.2%) occurred at home. More injuries occurred in rural administrative areas than urban areas, especially occupational injuries (occupational: chi-square=22.05, p=0.000; home: chi-square=13.89, p<0.001).

Conclusions Home and occupational fall injuries are common, especially in rural areas. Understanding the context of falls, especially identifying and working with particular occupational groups where they are prevalent, may identify risk factors and help target messages about primary falls prevention and interventions.

Learning Outcomes Using hand-held computers and local enumerators for data collection in sample areas resulted in minimal missing data and monitoring of data quality during the collection period.

3F.006 TRUCK DRIVERS' PERCEPTION OF ROAD DANGER IN NEPAL: A QUALITATIVE STUDY

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Background Nepal is fast expanding its road network, and over 90% of goods are transported by road. Large numbers of truck drivers are therefore exposed to the risk of crashes. We explored the perceptions and experiences of truck drivers and representatives from their professional association regarding road dangers. Understanding crash risk in commercial drivers can contribute to achieving Sustainable Development Goal 3.6.

Methods We conducted semi-structured interviews with 15 truck drivers and a focus group with 9 members of their professional association. The focus group and interviews were audio-recorded, transcribed, translated, and analyzed using thematic analysis.

Results Six themes were identified: unsafe road environment; bad attitude of the road users on road; risky road user behavior; inadequate road safety knowledge among road users; poor accountability of government agencies; and poor safety culture in the trucking industry. The following factors were perceived as contributing to road danger by truck drivers: strong desire of both drivers and passengers to arrive quickly at destinations; haphazard road crossing; vehicle overloading;

poorly maintained roads and vehicles; and trip-based payments.

Conclusion Changes at individual, societal, organizational, and governmental levels are needed to improve road safety in Nepal. Key areas for action are education, improved infrastructure, and accountability.

Learning Outcomes The truck drivers were able to identify factors contributing to both general as well as industry-related road safety issues in Nepal. These findings can be shared with their professional association in order to advocate for structural reforms and increased awareness of road safety within the industry.

3F.007 BISENSORY OCCUPATIONAL OVERLOAD AS A RESULT OF EXPRESSIVE DYSPHASIA SYNDROME

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Background We describe a newly identified manifestation of expressive dysphasia (impaired language production resulting in an inability to meaningfully communicate). Bi-sensory Occupational Overload as a Result of Expressive Dysphasia. This occupational disease is transmitted orally and is highly contagious in large social gatherings.

Methods Action research into the effects, transmission and severity of Bi-sensory Occupational Overload as a Result of Expressive Dysphasia was conducted biennially over a 3-day period in November for over 30 years.

Results We estimate that over 30 million Bi-sensory Occupational Overload as a Result of Expressive Dysphasia (BOORED) exposures occur every day (15 million person hours) resulting in a daily loss of \$252 million in productivity. The syndrome initially manifests as ptosis, lethargy, increasing somnolence, stertorous breathing and drooling. When severe and prolonged those affected may become comatose. It is exacerbated by the intensity of the expressive dysphasia, the number of sensory modalities affected, reduced modulation of auditory stimulus, reduced size combined with increased intensity of visual stimulation, reduced ambient light, increased ambient temperature, duration of exposure, repeated exposure and postprandial depression. of these, expressive dysphasia resulting in increasing loss of meaningful content combined with excessive hot air are the most important causative factors.

Conclusion Bi-sensory Overstimulation Resulting from Expressive Dysphasia syndrome is highly contagious. Large social gatherings that augment exposure to the syndrome are a significant occupational hazard especially for professionals working in the business, government, health and tertiary sectors. Strategies to reduce exposure are well documented and will be discussed using Haddon's 10 countermeasures.

3F.008 IS THE DESIGN OF YOUR LABORATORY A WHS HAZARD?

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While laboratories are complex workspaces, the question is whether or not the design, fixtures and fittings are exposing