

work in the organisation helped us to – align OHS objectives with business objectives of our organisation.

**Discussion** Periodic and Systematic review of Occupational Health and Emergency Medical Services helps in strengthening them to ensure safe and healthy working conditions for employees.

406

#### FIRST PHILIPPINE HOLDINGS SINGLE, MASS CASUALTY, AND DISASTER MEDICAL EMERGENCY RESPONSE STRATEGY

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**Introduction** First Philippine Holdings (FPH) is involved in geothermal, wind, solar, gas, hydro-electric power operations, construction and real-estate; located all over the Philippines. Although measures are in place to manage risks and prevent injury and illness, a robust medical emergency and disaster response plan (MEDRP) as part of ‘recovery measures’ was needed in case of control failures. The Philippines is prone to natural disaster (typhoons, earthquakes, etc.). FPH needed a medical disaster response plan that will address needs of employees and dependents, contractors, and host communities post-disaster and recovery.

**Methods** The corporate MEDRP Guide was developed and implemented. Site plans were reviewed, upgraded and integrated into site’s overall response plan. Drills were routinely conducted and reviewed to identify opportunities for improvement. Medical disaster plans leveraged on health resources coming from unaffected company locations. Lessons learned from super-typhoon ‘Yolanda’ (international name: Haiyan) were incorporated.

**Result** The MEDRP operates in all major worksites. The tiered and time-based medical and mass casualty response plan has 5 levels: Level 1 – immediate bystander response, Level 2 – first aid response within 4 min, Level 3 – health professional within 1 hour, and Level 4 – casualty in tertiary care facility within 3 hours of the incident. Level 5 covers transfer to a specialist facility if needed via land, helicopter or fixed wing aircraft to designated specialist facilities in Manila. Health components of disaster response plans include: emergency provision of medical services, water supply and sanitation, information and communication systems in coordination with local government

**Discussion** Developing a robust MEDRP was done via top-down approach working together with site end-users. Generic templates were developed, evaluated, and made specific at the site level ensuring fit-for-purpose and local ownership. The MEDRP is part of the overall ESH management system, managed just like any other business activity.

517

#### THE FIREFIGHTER MULTICENTER CANCER COHORT STUDY: FRAMEWORK DEVELOPMENT AND TESTING

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**Introduction** Recent epidemiologic studies in the United States have demonstrated excess mortality rates for cancer in firefighters compared with the general population. Firefighters are exposed to multiple carcinogens in the workplace through skin contamination and inhalation. However, we currently do not understand which individual exposures are responsible for cancer in firefighters, the mechanisms by which these exposures cause cancer, or effective means of reducing exposures. Development of a large multicenter firefighter cancer prospective cohort study will address these needs, but the framework for such a study needs to be first developed and tested among a smaller initial set of fire service partners.

**Methods** The study is harmonising existing firefighter cohort studies in Arizona and Florida, and expanding to include the Boston Fire Department and volunteer and combination fire departments. The study framework components include an Oversight and Planning Board (OPB), a Data Coordination Centre (DCC), an Exposure Assessment Centre (EAC) and a Biomarker Analysis Centre (BAC).

**Results** The OPB is providing oversight of the study through collaboration with fire service organisations and government agencies. The DCC is developing standardised participant survey data collection tools and analysis protocols sufficient to address the short- and long-term study objectives as well as linkage with long-term outcome data including cancer development. The EAC is developing a carcinogen exposure matrix using self-reported and quantitative exposure measurements to provide improved occupational exposure data for comparison with epigenetic outcomes and eventual cancer outcomes. The BAC is carrying out pilot studies of epigenetic markers of carcinogenic effect and cancer risk comparing firefighters with a range of cumulative exposures and non-firefighter controls.

**Conclusion** A framework is being established for the subsequent development of a large multicenter cohort study of cancer in the fire service; advance our understanding of firefighter exposures to carcinogens; and help identify biomarkers of carcinogen effect and cancer risk.

522

#### QUALITATIVE RISK MANAGEMENT TECHNIQUES IN EMERGENCY PREPAREDNESS AND RESPONSE TO IDENTIFY AND REDUCE OCCUPATIONAL RISK FACTORS

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**Introduction** Emergency response planners and responders have proper priorities when primarily focusing on life safety and incident stabilisation. Further down the list is the identification, prevention, and management of occupational risk factors for emergency preparedness, surveillance, and response personnel. There is a broad spectrum of potential chemical, biological, and physical exposures for occupations beyond first responders. Understanding and communicating these exposure scenarios and emergency response parameters is necessary for assessing and managing the occupational risk factors, but also for minimising public health consequences.

**Methods** Control Banding is a qualitative risk assessment strategy for determining work-related risks to establish appropriate control solutions and deliver simplified risk communication. Banding strategies were initially developed for controlling bulk liquid and powder chemical hazards, but have since expanded

to safety, nanomaterials, environmental, and multidisciplinary risk management applications. Banding strategies and processes were developed to provide a standardised and simplified framework to identify and reduce occupational risk factors for emergency preparedness and response personnel.

**Result** The U.S. NIOSH Occupational Exposure Banding process is now available to assist in protecting emergency response personnel from hazardous material exposures for tens of thousands of chemicals lacking Occupational Exposure Limits. Banding strategy frameworks for emergency preparedness have also been applied to physical and biological exposures. This framework provides consistency for informed risk management decisions that assists in identifying emergency-related occupations and provides proven risk communication for the development of trainings and interventions.

**Discussion** Emergency response scenarios include exposure potential for both noncommunicable and communicable work-related diseases. Therefore, medical and support personnel must be considered in multiple emergency preparedness parameters. The International Occupational Hygiene Association (IOHA) is seeking collaborations to develop and communicate trainings that increase awareness of these occupational risk factors and provide intervention techniques to increase response capacities and minimise public health consequences for emergency preparedness, surveillance, and response.

916

#### ARE WORK FACTORS ASSOCIATED WITH RETURN-TO-WORK IN AN OUT-OF-HOSPITAL CARDIAC ARREST SURVIVORS COHORT?

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**Introduction** Although survival rates after out-of-hospital cardiac arrest (OHCA) have improved, little is known about return-to-work of OHCA survivors and predictors. This study aims to study return-to-work in survivors OHCA.

**Methods** All consecutive OHCA survivors of our intensive care unit between 2000 and 2013 aged 18–65 years, and who had been working up to the OHCA had been included. Available data for pre-hospital care, in-hospital care, and care after hospital discharge, such as work items (work location, job classification, nature of the job) have been compared with work status and return-to-work.

**Result** Among 379 survivors followed, 153 were included in the study, and 96 returned to work (62.8%), mostly at the same job (n=72, 75% of 96). Predictors of return to work were younger age (adjusted odds ratio ORa 3.64 [1.10; 12.02], positions as managers and professionals, and services and sales workers (compared to technicians and associate professionals, clerical support workers, respectively ORa 3.43 [1.05; 11.22] and 4.69 [1.14; 19.37]), workplace occurrence (ORa 11.72 [1.37; 99.93]). Workplace location was strongly

associated with low flow, but not with no flow nor with other characteristic of the chain of survival.

**Discussion** The study emphasised the importance of return-to-work after OHCA and anticipation related to work location. On behalf of all the co-author, I agree our abstract will be being published by the BMJ OEM under the licence 'Licence to BMJ Publishing Group Ltd ('BMJ') for publication of conference abstracts'.

921

#### POSITION STATEMENT OF THE ICOH WORKING GROUP ON 'EMERGENCY PREPAREDNESS AND RESPONSE IN OCCUPATIONAL HEALTH (EPROH)

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**Introduction** The Emergency Preparedness and Response in Occupational Health (EPROH) scientific committee was developed to raise awareness of emergency risks for workers, to train managers, employees, and medical staff to prepare for and prevent accidents, acute medical events and disasters, and to mitigate their impact. The committee proposes a position statement on the fundamental need for prevention, response, first-aid treatment, and care in the field of occupational health care.

**Methods** This position statement was developed following Evidence Based Medicine principles, including literature review, practice networking, and surveys including workers' expectations.

**Result** The scope of the EPROH group will be focused on Emergency Plans, Procedures, Preparedness, and Training. To ameliorate the dramatic situation of workplace fatalities and accidents/events, EPROH experts have developed recommendations for what every worker should expect in case of a medical emergency, work-related or not, minor or major, while working for his/her company. Minimum response plans for every workplace include information about initial management and contact information. First aid must be encouraged, and occupational health and safety professionals will have to develop procedures that detail responses to emergencies, from minor events to major disasters. As needed, emergency providers should be followed up regularly by an occupational specialist for extended intervals after an event.

**Discussion** Although global harmonisation, local adaptation, and additional research are needed, this position statement emphasises the importance of having a global statement on the multiple aspects of emergency preparedness and response in occupational settings for every worker everywhere in the world.