

Methods The exercise took place at night on September 26, 2016. Fifteen days after, a questionnaire was sent to nurse students who took part as victims. Descriptive results are given in percentages and averages.

Result 126 participants did answer (82.4%). The average age was 23 years and 86% were women.

20.7% considered themselves as anxious or very anxious and 5.9% reported poor or very poor sleep. Their roles were assigned to severely injured (30%), involved (25%), deceased (21%), moderately injured (14%) and hostages (10%).

During terrorist attack, 56.9% found that they were in a uncomfortable situation. 85% of the participants considered the attack as fairly or very impressive and 79% were afraid at some point during the exercise. For those who were scared, half said that this fear remained after the end of the exercise. 21 participants felt necessary to have an interview with a psychologist.

More than 23% of participants felt that this exercise had been fairly or very disruptive and would deny or hesitate to participate again in a similar exercise.

Discussion Acting as a simulated victim, in a hyper-realistic live exercise, generate stress, fear or anxiety. In order not protect from unnecessary stress, it is essential for organisers to take this in consideration and offer to those who play victims acceptable conditions of comfort. Further studies are required to recognise factors that cause a predisposition of stress in such situations and set aside those with risks.

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TRAINING SESSIONS FOR OCCUPATIONAL PHYSICIANS AND NURSES: THE ADDED VALUE OF A SATISFACTION QUESTIONNAIRE

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Introduction An Emergency Medical Service (EMS) offers each year Medical Emergency Days (JAMU) alternating occupational physicians and nurses. Its goal is to provide participants with theoretical training and practical workshops on varied aspects of emergency medicine.

Satisfaction of participants was evaluated since 2008.

Methods A questionnaire was distributed during the JAMU since 2008. Questions concerned their overall satisfaction and their satisfaction concerning program content. They were also asked to answer which topics they expected to see developed and how they considered their emergency practice would change on a scale from 0 (as difficult as before training) to 10 (much easier than).

Result Since 2008, 1363 participants answered to this satisfaction questionnaire (48%). Participation to this questionnaire rose from 28% in 2008 to 56% in 2017. Nurses tend to answer more often (53%) than physicians (43%).

Overall satisfaction and satisfaction concerning program content rose from 84% of satisfied or very satisfied to 98% for both items these 2 last years.

The topics they expect to see addressed focus on psychiatric emergencies and technical procedures (infusion set or implementing an emergency kit). Other topics evolved these last years, such as CBRN threats or how to face a terrorist event.

Participants rated their ability to diagnose in the field of emergency medicine with a score that evolved from 6.5 in 2008 to 7.9 in 2016, and their ability to perform procedures with score that increased from 6.2 in 2008 to 8.03 in 2016.

Discussion Satisfaction questionnaire showed a growing interest for these training days, participants answered more often, they declared being more satisfied and more able to perform diagnosis and perform technical procedures. The program evolved taking into account not only their suggestions but also the terrorist environment, which may have an influence in the growing participation and interest of participant.

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TRAINING NEEDS FOR EMERGENCY CARE IN ORGANISATIONAL SETTINGS- 'FROM FIRST AID TO EMERGENCY COORDINATION'

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Introduction Accidents and acute medical events at workplaces are unfortunately not rare events – ILO estimates that 313 million people are injured and 350.000 are killed in work related accidents annually. Besides risk assessment and safety measures to reduce the number of incidents every company has to develop specific emergency plans to support and treat injured and critically ill employees as the worksite, which has to include First Aid as starting point for the 'Chain of survival'.

1 IOCH Newsletter Volume 13, Nr. 2,3. – page 1: Message from the new ICOH president Jukka Takala.

Methods In an electronic survey which was sent out to international Red Cross/Red Crescent colleagues and Occupational health specialists interesting insight in the global provision of First Aid at workplaces and especially on cardiac arrest could be gained.

Result More than 100 answers from different part of the world demonstrate that in $\frac{3}{4}$ of the country's First Aid is legally required and in about 70% risk assessments define the number of trained First Aiders. Emergency medical drills in companies are only mandatory in 50% of the countries.

The fact that in 40% of the answers the average responding time of an EMS is more than 30 min in rural areas and 30% up to 20 in urban zones gives a clear mandate to improve the training of First Aid and numbers of First Aid trainers.

Discussion Some best practices and ideas on how to improve the quality of training First Aiders and other health care provider will be discussed.

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THE STATUS OF EMERGENCY PREPAREDNESS AND RESPONSE IN PETROL STATIONS IN BUSHENYI AND SHEEMA DISTRICTS IN UGANDA

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Introduction According to Uganda Revenue Authority, there has been an increase of newly registered vehicles from 1.8%–38.7% from 2009 to 2013. This has led to the emergence of many petrol stations in the country. However, there is little attention put in terms of safety and health especially in emergency preparedness and response. There is increasing evidence that emergency preparedness and response is one of the critical factors for improving safety and health at work places. Despite its importance, there seems to be little emphasis in its development and implementation in Uganda. We carried out routine inspections in the districts of Bushenyi and Sheema to assess emergency preparedness and response compliance with Uganda's Occupational Safety and Health Act 2006. This study was focused mainly in the area of fire safety and the presence fire assembly point.

Methods This study was carried out using Uganda's Occupational Safety and Health check list which was administered to 25 selected workplaces in the above districts from April 2015 up to April 2016. The data was collected and analysed using Excel programme.

Results Out of twenty six workplaces inspected, 69% had fire extinguishers, 31% didn't have fire extinguishers, 66% had sand buckets and 34% had no sand buckets. All the twenty six workplaces had no fire alarm, no emergency action plan, no assembly point, no emergency contacts, no signage and no fire drills have ever been done.

Discussion The findings from this study show that emergency preparedness and response has not been paid much attention yet it is one of the strategies for improving safety and health at workplaces. The results also show the employers only knew fire extinguishers and sand buckets when it comes to the area of emergency preparedness and response. The fire extinguishers in some of these workplaces had long expired and were written in Chinese language which the locals could not comprehend. There is need to sensitise the employers and employees on the importance of developing and implementing a sound emergency preparedness and response plan.

306 HUMAN BIOMONITORING FOR EMERGENCY RESPONDERS – EXPERIENCE, BENEFITS AND LIMITATIONS –

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Introduction Human Biomonitoring (HBM) was introduced decades ago for the monitoring of workers' exposure to chemicals. Meanwhile, procedures like sample collection/transport are standardised and assessment values are continuously derived or updated. But HBM is also a useful tool for monitoring exposure after incidents such as chemical spills or large fires. Accordingly, the exposure situation of firefighters, other emergency responders or bystanders has come into the focus of occupational and environmental medicine and toxicology.

Methods A standardised and streamlined procedure for the HBM of emergency responders was established at two large chemical production sites. The key constituents of the program comprise a tick box list of altogether 36 chemicals, a short questionnaire, and a predefined sampling/transport chain. In 2016, this program was carried out after a major accident on one site. Samples were

collected from firefighters, other company employees and external rescue forces. Exposure to benzene, toluene and polycyclic aromatic hydrocarbons (PAHs) was monitored using sensitive, specific and quality-controlled biomonitoring methods.

Results An additional exposure to benzene was found only in firefighters, with a maximum S-Phenylmercapturic Acid (SPMA) concentration of about 40 µg/g creatinine. Most results were in the range of the general background, but moderately increased into the typical range of smokers. Benzene exposure was not only confirmed for active firefighters but also for post-accident firewatch forces. Biomarkers for toluene and PAHs were all within the normal range, which was unexpected since PAH biomarkers are often found in post-operation samples of firefighters. However, this result accords with the observation of an almost vertical smoke propagation.

Conclusion A high degree of preparedness is essential for the conduction of HBM programs after chemical incidents. Professional firefighters are usually well prepared to avoid overexposure to chemicals. However, residual spot contamination can be relevant and needs to be considered for professional safety measures.

321 INTEGRATING OCCUPATIONAL HEALTH & SAFETY THROUGH EFFECTIVE OCCUPATIONAL HEALTH PROGRAM

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Introduction Indian Oil Corporation has taken a series of initiatives to ensure safe and healthy working conditions for employees. Aim of the study was to strengthen and streamline the Occupational Health and Emergency Medical Services across the Corporation.

Materials and methods Occupational Health Services (OHS) audit of Ten IndianOil Refinery units was conducted and following points were observed-Well First Aid Centre, Provision of dedicated communication facility, which can be activated in the event of fire/Accident in Refinery, Prominent display of Siren Protocol for Accident/Disaster, Drug register, System of daily check of emergency drugs, oxygen cylinders and other resuscitation equipment, daily check of the refrigerator, Proper record of illnesses and injuries, updated record of 'at-risk' hazardous materials used or produced at the worksite, Updated version of Material Safety Data Sheets-for acute exposure management, Record of daily check of housekeeping, Provision and maintenance of First aid boxes equipped with prescribed content, readily accessible during all working hours, Percentage of employees identified for FA training, Well equipped Ambulance van should be available for the purpose of transportation of serious cases of accidents or sickness, Training in BLS (Basic Life Support)(CPR-Cardio Pulmonary Resuscitation), Disaster Management Plan (DMP), Emergency preparedness plan Functional organogram in case of disaster situation Details of facilities available at nearby hospitals, are Triage guidelines incorporated and training imparted to employees.

Occupational Health and Wellness Index was created and implemented across the Corporation to further reinforce these targeted efforts.

Result The purpose of the study for establishing Occupational Health and Emergency Medical Services management frame-