

include: Memorandums of Understanding with physicians to provide care, annual training for clinic staff, standardized community plans, standardized personal protective equipment and other disaster supplies, and improved communication with first responders.

Lessons Learned: This collaboration has enhanced safety and preparedness in the Omaha area. Clinics participate in community exercises, helping them understand the logistical and safety challenges that will be faced if the plan is activated.

CS-135-02

Mass Patient Decontamination Guidance against Chemical Threats

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Situation/Problem: Everyday, large quantities of hazardous chemicals are produced, transported, stored, and used for industrial and household purposes. Stockpiles of chemical weapons around the world, known or long-since abandoned, still exist. The potential for a large-scale chemical release requiring decontamination of an overwhelming number of people has garnered wide interest. However, insufficient research has been conducted on decontaminating people. Furthermore, many current guidance and best-practice documents do not address the full spectrum of issues that a community may face when large-scale patient decontamination is necessary in a mass chemical exposure incident.

Resolution: Emergency response and medical communities and the U.S. government have identified a need for evidence-based national planning guidance for mass patient decontamination resulting from a large-scale chemical release. A basic assumption of this work is that mass patient decontamination will be conducted by the local affected community. Due to the fast-acting nature of chemicals and the need for patients to be decontaminated as soon as possible, the federal government would not be able to participate directly in the response during the appropriate time window. Therefore, this guidance is directed primarily at local officials.

Results: The general approach to patient decontamination presented here is a tiered response strategy designed to match the nature and extent of decontamination to the characteristics of the incident, including the nature and extent of patient contamination and the capabilities of the responding or receiving organization. Rather than prescribe a specific protocol for all incidents, this approach allows flexibility and a scalable response.

Lessons Learned: As with any other mass casualty incident, an incident involving mass patient decontamination will likely present challenges with resource constraints. There will presumably be more patients than can be adequately cared for under normal practices. Responders and receivers will need to prioritize patients for decontamination as well as medical care.

CS-135-03

WITHDRAWN: If You Can't Stand the Heat!

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SR-135-04

Heat Stress and Strain Monitoring for Electric Utility Workers

E. Brown, University of California Los Angeles, Los Angeles, CA.

Objective: This project is the culmination of two years of intense data collection and analysis. Lineworkers (and some other occupational classes) were monitored for heat stress indicators (WBGT, metabolic load based on task analysis, and clothing factors) as well as heat strain (heart rate and oral body temperature).

Methods: Various other potentially-related factors were collected, such as acclimatization status, BMI, and prescription drug use. Over 600 one- to three-hour tasks were measured. The workers were monitored mostly in a very hot, very dry desert environment. This data has been compared to a variety of standards and indices. OSHA/CalOSHA, ACGIH®/NIOSH, and several others. The following questions were asked: Were the workers over-exposed to heat, according to the TLV®, the RAL/REL,

or task-based STEL? Which job classes had the highest exposure? What was the incidence of heat strain indications at certain set points for different job classes and different job tasks? At what temperature, RH, WBGT, Metabolic Rate, and what clothing combinations were indications of heat strain present? Were indications of heat strain present at the 85/95 °F CalOSHA set points? What predictors of heat stress showed the highest influence in predicting heat strain indications?

Results: Preliminary data analysis and evaluation suggest that despite body temperature being suggested and utilized as a primary outcome measurement by many organizations, elevated body temperatures were not found in any but very rare instances, and these were not found to be related to task intensity or WBGT temperatures.

Conclusions: Heart rate seems to be a better outcome tool, and instead of a flat heart rate, a difference from baseline may work.

CS-135-05

Occupational Law Enforcement Case Study of a Mexican Migrant Farm Worker Gone Missing during a Heat Wave

J. Nevarez, OSHA, Arlington Heights, IL.

Situation/Problem: A 36-year-old male migrant farm worker went missing while detasseling in a corn field in Northern Illinois on a day in which the heat index reached 115 °F and humidity peaked at 100%, July 19, 2011. An advocacy group referred the case to OSHA on July 22, 2012. The employer became aware that the employee was missing about an hour after he had entered the corn field at 11:30 am. Local authorities were called and a search effort was undertaken but unsuccessful. Seven weeks later a body was found in another corn field but the county coroner could not establish a positive ID as that of the missing worker. Employees were recruited in Mexico and issued temporary visas to come to the U.S. and perform farm work. Training on heat stress was given in the form of booklets written in both English and Spanish which employees were expected to read. However, some of the employees could not read either language. Additionally, the employer provided

a very limited heat stress program to the employees while working in hot weather.

Resolution: OSHA issued a General Duty 5(a)(1) citation to the employer for exposing employees to heat stress and lacking an effective heat stress program.

Results: The employer abated the citations by implementing the provision of appropriate amounts of cool potable water to employees, and added elements to their existing heat stress program that included training in verbal Spanish, health monitoring, adequate water provision, shade, and a work rest regiment.

Lessons Learned: Employees need training in a manner they can understand. In order for employees to work in hot weather an employer should implement an effective heat stress program as prevention of accidents and not as a reaction to them.

Podium Session 136

Construction

Wednesday, May 22, 2013, 1:30 PM – 4:30 PM

SR-136-01

Exposure to Crystalline Silica during Various Floor Burnishing Processes

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Objective: Floor substrates such as concrete, vinyl composition tile (VCT) and marble can contain crystalline silica. Some floor finishing operations may include a dry burnishing process on unfinished floors and can generate dust. Exposure to crystalline silica during burnishing depends on a number of variables including substrate, burnishing machine, grit of the abrasive pad and duration. This study evaluated the influence of these variables with respect to worker exposure to crystalline silica.

Methods: Three test areas were selected for study including concrete, VCT and marble substrates. Test area volume was documented. Ventilation systems were turned off. Burnishing was performed using propane and electric machines and a variety of abrasive pads. Samples for respirable and total crystalline silica and dust were collected

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