

Use of tabletop exercise in industrial training disaster

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Training exercises are now frequently used in health disaster and emergency medicine to train first responders,¹ including the use of tabletops' exercises.²⁻⁴ However, these kinds of drill are barely described in occupational and industrial safety and health. They represent an interesting alternative to real life disaster plans, considering the enormous human and technical resources that are required, and the disruptance of company's daily business. We aimed at developing a special training for professionals of health and safety (occupational physicians, hygienists...) in case of health disaster in industrial settings, using a tabletop exercise.

We organized a one day-session about disaster fundamentals for 28 occupational physicians included in a Master degree in emergency medicine training. A tabletop exercise was made based on a scenario of a fire in a plant with risk of chemical explosion - 22 victims and one dead (person). Three groups of 9/10 participants had 1h15 to discuss and « play » rescue operations from the initial accident to the discharge of the last victims from the triage centre. They were supervised by a physician and a nurse who are specialized in disaster training. We used a large tabletop representing the industrial plant and the figurines/vehicles (patients, industrial and emergency responders, firemen and police officers, journalist...). Satisfaction and cost were evaluated such as repeatability.

The participants were largely satisfied by the training and believe, such as the teachers, that the exercise well illustrates the roles of occupational physicians, the triage centre, and intricate logistics during a health disaster. The direct cost was \$1,285 (975 euros), namely \$646 for the figurines and \$639 for the supervisors for the first year (\$46 per participant). At the opposite of a real life exercise, we didn't notice any impact on daily activities of the company/plant. One year later, the tabletop was performed again with other 28 participants

with similar satisfaction and reduced cost (only \$639 for the supervisors, \$23 per participants).

Tabletop exercises simulating industrial disasters appear to be a cost-effective way to train professionals of health and safety. Similar experiences are reported in other contexts: airport disasters,² biological threats in a public health preparedness,^{5;6} training of medical technicians for emergency.³ Tabletop exercises could also be used to train different categories of participants in similar drill. Considering the purpose of training participants to organise the prevention and the management of industrial disasters in their own company, it was seen as easier and as cheaper than real life disaster plans.

To conclude, although real life exercise remains essential (especially in order to challenge emergency responders) effectiveness should be studied in depth. We think these kinds of exercises should be developed in the industrial settings.

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