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Challenges to the Operational Implementation of Exercises in the Field of Health and Treatment in Accidents and Disasters in Iran

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Letter to the Editor

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Dear Editor,

The process of the transformation of human life and the increase in accidents and disasters show the inevitable nature of disasters. With environmental and population changes and manipulations and the increasing trend of climate change, societies are more and more at risk of disasters (1). Natural and man-made disasters have always accompanied mankind throughout history and have had numerous adverse effects on the environment and humanity, including loss of life as well as financial, psychological, and environmental damages (2).

There are two approaches to dealing with disasters. The first approach is reactive. In this approach, society waits until a disaster or problem occurs and then tries to respond to or solve it. In the second approach, which is called proactive, society identifies threats or dangers and plans to prevent them and increase preparedness to deal with them. Due to the fact that there is little time for critical actions during disasters, the second approach is recommended to reduce the effect of disasters. In other words, by spending time to analyze and assess the risk of disasters and plan based on the results, a large part of decisions and actions are taken before the occurrence of disasters (3).

In accidents and disasters that cause injury and illness to the affected people, quick and appropriate medical response, correct triage, and evacuation/transfer and distribution management of the injured and patients are important influencing factors in improving the clinical conditions of the injured (4). Among the many components of disaster management, the most important responsibility is upon the medical centers as the main organizations, and providing plans for preparing and responding quickly to the crisis will have significant effects on reducing the death toll (5).

This report summarized the field evaluation and review from the beginning to the end of the exercise and was performed by the research team who participated as evaluators in the implementation process. It is hoped that this report will be considered in the organizations involved in crisis management as an important and applicable learned lesson in future planning. This study aimed to examine the challenges and weaknesses of the exercise (maneuver) or practical learning that was held with the scenario of evacuating the injured from a chemical and trauma disaster to the hospitals of Isfahan city, Iran, in September 2021. In this maneuver with a specific scenario, Table Top Exercise was conducted twice before the day of the maneuver.

In the scenario, 100 injured people were

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expected, including 60 red-level injured (50 individuals with trauma injuries and 10 individuals with chemical injuries) and 40 yellow-level injured (trauma) who were supposed to be transferred from the disaster area to Isfahan hospitals by two Bell 214 and one Chinook helicopters in five sorties. The maneuver started with the announcement of the head of the executive team at 9 a.m. After the implementation of the first stage (i.e., the evacuation of the injured from the hot zone to the warm zone), it was found that the execution team of the maneuver had reduced the number of injured to 60 people without coordinating with the scenario development team and the evaluator. Due to the presence of 10 chemical victims among the injured individuals and despite the warning of the management agents of the maneuver for the decontamination tent, the sewage collection source was not foreseen.

After transferring the injured to the warm zone, the initial triage was done; however, due to the fact that the triage tag was not attached to the injured, it was impossible to identify them. Moreover, even the tags of the injured were exchanged with each other and the appropriate triage tag was not used at the site. After the landing of the first Bell 214 helicopter, 6 red-level injured were transferred to the helicopter with stretchers; nevertheless, re-triage was not done in the helicopter and there was no first aid equipment available in the helicopter. Since the Incident Command System was not used in the management structure of the maneuver and the Emergency Operation Center (EOC) was not established, the commander rather than staying in the EOC room presented in the hot zone and moved the injured.

After transferring all the injured to the defined hospitals in the scenario, re-triage was not performed on the injured when they were being evacuated from the Bell 214 and the Chinook helicopters. In the scenario, the level was not determined for the disaster site and the hospitals. There was no communication and coordination between the EOC of the disaster site and hospitals and the EOC of the university as a higher-level organization. In the scenario, the Incident Operation Post was not mentioned at all and the whole maneuver was developed based on a general plan. The method of summoning the personnel at the disaster site and hospitals was not clear, and the personnel was already present at the site without mentioning the method of summoning. The method of communication between the disaster site and hospitals and the risk communication during the maneuver was not obvious.

One of the strengths of the maneuver was the security coordination at the disaster site during the transferring process and in hospitals, as well as the presence of firefighting teams. In the end, it is suggested that to increase preparedness, provide appropriate responses, and reduce casualties in accidents and disasters, Table Top and operational exercises be carried out in the preparation phase, taking into account the challenges mentioned in this research, so that in the event of accidents and disasters, medical centers have high preparedness with the appropriate resilience to respond. Moreover, it is recommended to conduct similar studies in other communities with larger sample sizes, in different situations, and with other strategies for the proper management of accidents and disasters.

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