CBRNE Preparedness. Metropolis the First Italian Non-Conventional Biological Drill

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Study/Objective: Preparedness for terrorism and mass casualty emergencies is a continuous process of planning, training and drills, in which the success of each element is dependent of all the elements involved. In a new age of potential biological terrorism, there is an increased need for frontline clinicians, and all institutions involved in homeland security and emergencies response to work together, to increase the ability to cope with these potential threats. In 2016, Milan, Italy - the first non-conventional biological drill to test all entities involved in the response and treatment of mass casualty victims was organized.

Background: The management of Mass Casualty Incidents (MCIs), especially non-conventional, due to a possible release of Chemical, Biological or Radiological or Nuclear substances (CBRN), require that all institutions involved have the appropriate knowledge, technical and organizational skills.

Methods: The prefecture of Milan and the Afghan Research and Evaluation Unit (AREU), (The Regional Medical Emergency Service Company for Lombardia) decided to jointly organize a non-conventional drill. The METROPOLIS exercise was organized in order to test all the institutions involved in MCIs, both from the point of view of public safety, homeland security, and medical response. Two hospitals were involved, one as National Referral Center for Bioterrorism (for the non-conventional part of the exercise) and the another one for the treatment of conventional mass casualties.

Results: The exercise was organized with the simulation of a biological attack in a subway station and simultaneously a terrorist attack at the football stadium, with more than 100 victims and hostages. Prehospital decontamination procedures were performed and biohazard countermeasures were tested on the field and in hospital.

Conclusion: It was the first time in Italy, that a metropolitan non-conventional drill was organized, with a multitasking, multidisciplinary approach, underlining the importance to measure the performances and adequate skills of all entities involved in this exercise.

Biological Nightmare, How to Respond to a Smallpox Outbreak

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Study/Objective: To discuss the methods of detection and response, if a smallpox outbreak were to occur, due to a biological attack.

Background: With the availability of gene editing technology, even moderately trained personnel can manipulate a genome to make a virus more virulent. Combined with the possibility that strains of the smallpox virus are still available globally, since the fall of the Soviet Union, the possibility of an attack is entirely possible, and the efficacy of the response will determine if a local outbreak becomes a global pandemic.

Methods: Combining historical epidemiological data on the methods used to eliminate smallpox, such as the Ring vaccination, along with lessons learned from exercises such as...