

Biothreats and Mass Events- The Commitment of the Biosafety Professionals

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Mass events such as the Olympic Games and the World Cup have posed new challenges to governments and managers of CBRNE programs. To be prepared it is not enough to have the facilities and mobility plans ready for the games, but it is critical to have included in the plan the review of capacities and competences for the response to emergencies of all nature, including biological.

Laboratory diagnostic and surveillance capacity are central to the global fight against outbreaks of infectious disease, whether naturally occurring or deliberately caused. However, most laboratories in developing countries lack the capacity to safely and securely handle dangerous biological agents.

These challenges are not unique to the global health community, and there is a growing recognition that the global health and security communities must come together to address the full spectrum of biological risks.

Many of the facilities handling infectious agents in developing countries were built more than 15 years ago, with little or limited provision for biosafety and biosecurity in terms of both design and practice. The conditions found in the majority of these facilities are far below the standard of laboratories in developed countries. Efforts need to be made to improve the quality of facilities which will give response to the daily demand and to an enhanced demand due to emergencies which may occur during mass events.

The Biosafety Associations can play an important role in enhancing awareness and supporting capacity building training of the biosafety professionals whose will be the key person for the bio risk management. The challenge is to implement the programs in a systematic and sustainable way when faced with limited resources and infrastructure. It is important the establishment of partnerships and channels that can assist in the implementation of those programs considering the available resource within the country.

The biosafety community can act as a useful bridge between governments and the private sector, and become an influential partner in encouraging closer engagement of all health professionals in the CBRNE program. The Governments should establish a structured mechanism to incorporate the contributions and expertise offered by the biosafety community as well as provides the resources necessary to the bio risk management.

Many companies in the pharmaceutical and biotechnology sector carry out work involving biological agents. A significant number are involved in research to discover new medicines to prevent or treat infectious diseases. As is the case for life science research, some work may be categorized as dual-use according to criteria established by the US National Science Advisory Board for Biosecurity. The work may involve organisms which pose a security concern under national legislation, such as the US select agents list.

Companies that work with biological agents have strict biosafety and biosecurity programs to address associated risks, and depending on the size and complexity of the organization, employ biosafety professionals to support those programs.

The main challenges to ensure accomplishment the management of bio risk programs are the public research institutes and hospitals that in developing countries do not count with sufficient budget to put into force the requirements of biosafety and biosecurity plans. Compliance with national and international legislation is a strict requirement, but many laboratories often go beyond this and apply global minimum standards. The control and continuous survey of biological agents which can be used as a bio threat during a mass event should be implemented in all organization working with these organisms. Biosecurity measures such as personnel reliability and control of access of facilities are topics to be enhanced to avoid unintended use of biological materials.

All institutes should conduct organizational assessments regarding potential vulnerabilities that could give aid to those seeking to develop or use biological material and should take all reasonable measures to reduce their risk of exploitation. It is critical to ensure that all reasonable measures are taken to promote the safety and security of high-risk pathogens and toxins within their possession.

In addition, there is a call for the development and implementation of standards on biosafety and biosecurity; education and awareness-raising for life scientists on the risks of misuse of biology; and capacity-building activities, particularly in developing countries.

Besides the commitment of laboratories workers and scientists, medical and nursing personnel are key players to give response to emergencies in every hospital. Motivation is the most important element in recruiting the right people for the right job. Training and supporting leadership to response to emergencies are key within the CBRNE plan.

Last but not least, communications are of outmost importance for the medical people. Hospital professionals should be ready to be able to communicate with each other and authorities. Finally, each hospital needs to maintain a stockpile of specialized medications that will be administered in case of a real event.

In summary, a well prepared bio risk management plan should be developed, tested and put in place with previous drills in order to ensure a safe and secure mass event. It is important the authorities to consider the global visibility of the country during a mass event and that any incident without control can put under risk not only the population of the country but also delegations of many countries. So the best way to avoid the risks of bio threats is to be prepared and to count with the biosafety community to support this initiative.

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