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**Original Article** 

## The Comparison of Response Frameworks on Chemical, Biological, Radiological, and Nuclear Incidents in Four Countries/Region

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## **Abstract**

We evaluated the emergency management frameworks in response to bio-terrorism, and compared the differences among the United States, Japan, the United Kingdom, and Hong Kong Special Administrative Region in which the counter-terrorism measures are more comprehensive. The results indicated that in these nations/region the competent authorities were designated by the guideline of all-hazard approach to emergency management. The competent authorities were composed of the security, the law enforcement, and the search and rescue divisions as an integrated emergency response system in regard to chemical biological radiological and nuclear (CBRN) threats. These divisions included the fire department, the police department, the emergency medical service system, and the coast guard system. Depending on the scale of terrorist attacks, the military could also be merged into the CBRN response system. This system, focused on horizontal communication and collaboration across different divisions, could rapidly integrate resources and achieve an unifying command and control.

**Keywords**: All-hazard approach, Bioterrorist attack, emergency response, chemical, biological, radiological, and nuclear (CBRN)

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