

Assessment of Earthquake Preparedness of the Emergency Medical Services in Bogota, Colombia: A Mixed-Methods Analysis

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Background: Bogotá, the capital of Colombia, is perpetually under the threat of a major earthquake that could overwhelm the response capacity of the local emergency medical services (EMS). This study is an attempt to assess the current level of medical earthquake preparedness of EMS, and conclusions and recommendations that have the potential to improve disaster response planning in this South American country.

Methods: A mixed-methods approach using qualitative and quantitative paradigms was used to collaborate data. Questionnaires and checklists were designed to gather information from the search-and-rescue services, EMS, hospitals, and the District Health Secretariat Emergencies and Disasters Office. The checklists were developed in consultation with experts from the Kandilli Observatory and Earthquake Research Institute, the US Department of Health and Human Services, and the Israeli Trauma Society. Descriptive content analysis of existing emergency plans/protocols and ethnographic observations of preparedness drills and meetings ensured a rich qualitative understanding of the lacunae that subsequently were compiled.

Results: Inter-organizational communication, training, coordination, transportation plans, and resource allocation were diagnosed as deficient in EMS preparedness for an earthquake. Search-and-rescue services, hospitals, and ambulance services fared equally poorly in all the criteria assessed. Disaster education and training were considered at a critical level, and needed urgent attention.

Conclusions: This study formulated the Bogotá Medical Earthquake Plan to enable a better response should an earthquake occur in Bogotá, Colombia.

Keywords: assessment; Colombia; earthquake; emergency medical services; preparedness

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Strengthening International Preparedness and Response for Radiological and Nuclear Emergencies: Role for the Connecticut Radiological Emergency Response Biosimetry Laboratory

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Introduction: Contingency planning is essential to mitigate the consequences of accidental or terrorist-related radiological incidents. Accordingly, international organizations, including the World Health Organization (WHO) and International Atomic Energy Agency sponsored a series of International Convention Exercises (ConvEx) to assess the worldwide ability to assist an affected nation, and facilitated international meetings (e.g., BioDoseNet) to establish a global laboratory network for biosimetry. The participation of the Connecticut Radiological Emergency Response Biosimetry Laboratory (CT-RERBL) in ConvEx-3 and BioDoseNet 2008 is described.

Methods: The CT-RERBL participated in ConvEx-3 as a Level-B contributor. Information exchange among international organizations and the CT-RERBL was accomplished via e-mail. The 1st Coordination Meeting of the WHO BioDoseNet was held in September 2008, to ascertain tasks and criteria required to establish a global network of biosimetry laboratories that support management and decision making in cases of large radiation emergencies.

Results: Seventy-five countries participated in ConvEx-3. The CT-RERBL provided input toward the development of a consensus approach regarding the medical management of contaminated and radiation over-exposed victims. Representatives from 28 countries attended the BioDoseNet conference in New Hampshire. Seven Task Groups were formed to address seven areas essential for the development of a global Biosimetry Laboratory Network. As part of Task Group 7, the CT-RERBL will establish patient selection criteria for biosimetry assessment.

Conclusions: The participation of CT-RERBL in international planning initiatives for radiological catastrophes will help bolster international efforts to establish common concepts, expectations, and provisions for a coordinated global response of relevant organizations during a radiological emergency.

Keywords: Connecticut Radiological Emergency Response Biosimetry Laboratory; disaster health; disaster management; emergency; nuclear emergency; preparedness; radiological emergency

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