

Results: A total of 56 people presented for evaluation; 24 confirmed cases of Botulism; 11 patients were intubated; two deaths; and 25 doses of antitoxin were given.

Conclusion: Many lessons learned will be presented, including how our extensive planning for Ebola assisted us in this Botulism response. We determined that our hospital transfer centers were an untapped resource.

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Challenges of Establishing National Public Health Rapid Response Teams during an Emergency

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Study/Objective: To highlight the common challenges of establishing national public health Rapid Response Teams (RRTs) during an emergency, and to identify potential solutions to avoid delays in future responses.

Background: The International Health Regulations dictate the need for countries to establish disease outbreak response capacity. RRTs, multi-disciplinary teams trained in public health emergencies, can help fulfill this need as a component of a larger emergency response infrastructure. However, the need for RRTs is often only realized during the onset of an emergency, leading to substantial delays in effective response measures.

Methods: National public health RRT challenges were identified through direct observation of RRTs during emergencies, as well as discussions with RRT managers involved in outbreak responses in seven African and Asian countries in 2016.

Results: Three common challenges were identified. One challenge is the lack of a trained, ready, and deployable workforce. In addition to public health core competencies, RRT members require training on the country's emergency response infrastructure and deployment processes, as well as exercises to translate their subject matter expertise into timely, actionable, and data-driven objectives. Another challenge is insufficient human resource capacity for response during large and/or growing emergencies. A surge-capacity mechanism is needed, such as rostering personnel with key skills required for common emergencies, including the enrollment of people who are not directly involved in emergencies day-to-day. Finally, the lack of delineated emergency response mechanisms, such as roster activation processes, financial allocation and disbursement, pre-deployment briefings, and in-the-field logistics, can delay RRT response activities.

Conclusion: These challenges highlight the need for pre-emergency planning for RRT implementation, specifically delineating the mechanisms and processes for an effective RRT before an emergency occurs. Countries without an existing RRT, and those in the process of establishing an RRT, should preemptively address these challenges to ensure a rapid and effective response.

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An Effective Health Resource Availability Mapping System for Decision Making in Crises Contexts

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Study/Objective: An assessment aiming at analyzing the ability of the health system to provide priority emergency services, and at developing a recovery plan was conducted using the WHO HeRAMS: Health Resources Availability and Mapping System

Background: During a major crises like what the Central African Republic (CAR) is experiencing, it appears very challenging to have reliable information to plan emergency responses and for the restoration of essential health services. HeRAMS provides the state of health infrastructures, their functionality and reasons of their non-availability or non-functionality.

Methods: Briefing and mobilization of health stakeholders, followed by adaptation of a standardized questionnaire that was administered to key informants from each level of care (primary, secondary and tertiary) and health coordination offices, by telephone and/or site visit, or filling of a hard copy. The questionnaires were collected and verified by central, regional and district health officials and information triangulated by health partners who worked in the field.

Results: Two assessments were done in 2014 and 2015 on respectively 814 and 1008 health facilities. A detailed overview on human resources, clinical equipment, availability of health services and infrastructures was done: where 68% and 52 % were respectively functional in 2015 and 2014. An overview on key services such as: essential trauma care, neonatal and maternal care, STIs and HIV/AIDS, and noncommunicable diseases including mental health; as well as reasons of non-functionality: human resources, equipment and medical supplies. The result is help in identifying geographical areas with major service gaps, and developing restoration strategy and plans, including the health sector transition plan for 2015-2017.

Conclusion: The assessment with HeRAMS coupled with epidemiological data helped to set humanitarian priorities and develop lifesaving services, along with the restoration plan of public services. It provided a baseline for further medium and longer term planning. It should be envisaged in major humanitarian crises.

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Approaches to the Use of Research Knowledge in Policy and Practice during the Syrian Refugee Crisis

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Study/Objective: With an increasing demand on health systems to respond to the Syrian refugee migration crisis, there couldn't be a better time to conduct rigorous research to examine approaches to evidence informed decision-making in healthcare delivery for the Syrian refugees. The purpose of this

research is to: a) Identify approaches to supporting evidence informed decision-making in health systems serving Syrian refugees, b) understand some of the barriers and facilitators to using these approaches in health systems serving the Syrian refugee crisis. The first study of its type done as an integrated KT, where it was completed in close partnership with the ultimate users Médecins Sans Frontières, also known as Doctors Without Borders (MSF).

Background: Providing essential healthcare is becoming a huge undertaking requiring a multifaceted approach for over four million Syrian refugees. The scarcity of available resources makes it imperative that resources are used based on research evidence, to maximize the health outcomes among vulnerable populations. The challenge is that there is still a gap on how to best utilize research evidence to inform decision making in the field.

Methods: Document analysis and key informant interviews utilizing semi-structured questions at Médecins Sans Frontières, to identify some of the barriers and facilitators by using Knowledge Translation (KT) approaches in health systems serving the Syrian refugee crisis.

Results: Facilitators to MSF's use of research evidence in decision-making include MSF uses surveys to assess and identify research gaps in the field. Barriers to MSF's use of research evidence in decision-making include lack of a receptive climate for research remains a barrier to the utilization of research knowledge in decision-making and lack of a formalized process for field staff to acquire research evidence.

Conclusion: Understanding the findings of the above research questions would enhance the quality, effectiveness and coverage of healthcare programme delivery for Syrian refugees and enable the health system to be more responsive to the healthcare needs of the Syrian refugees.

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Verification of an Area Disaster Resilience Management System Model for Healthcare During the 2016 Kumamoto Earthquake

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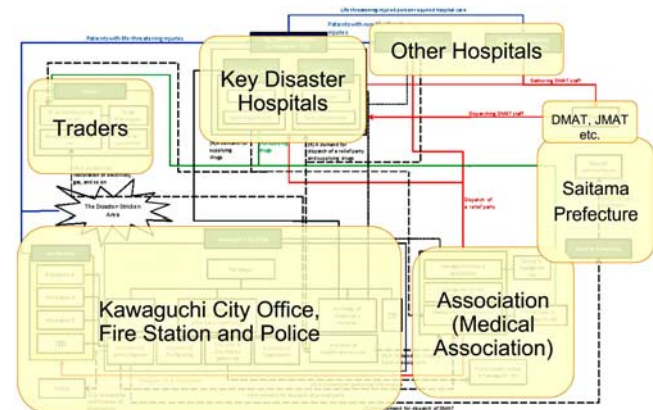
Study/Objective: The research group is developing an Area Disaster Resilience Management System Model for Healthcare (ADRMS-H), composed of municipal and health care organizations, to enhance the health care resilience of a community (Figure 1). This model is an extended form of a Business Continuity Management System for a single organization. We are introducing the model to Kawaguchi City in Saitama Prefecture. In this study, we investigate successes and failures of disaster medicine during the Kumamoto Earthquake in April 2016, with the intent to verify the ADRMS-H model.

Background: Japan faces a high risk of natural disasters such as earthquakes, during which it is urgent that countermeasures are taken to secure business continuity. To enhance the health care resilience of a community, ADRMS-H must be established.

Methods: We interviewed the medical staff of the Japanese Red Cross Kumamoto Hospital, and other disaster-based hospitals, to investigate successes and failures of disaster medicine performed during the Kumamoto Earthquake. We also interviewed medical assistance teams, such as the Disaster Medical Assistance Team (DMAT), the Disaster Psychiatric Assistance Team (DPAT), and so on. We investigated if a function to achieve a positive result or a function to overcome negative results has been incorporated in the ADRMS-H.

Results: In disaster medicine during the Kumamoto Earthquake, “information collection,” “chain of command,” and “provision of relief supplies” were the main failures. The functions to overcome these issues have already been incorporated in the ADRMS-H model. On the other hand, the successes of assistance by the DMAT command headquarters outside of the disaster area (Tokyo and Osaka in this case) were effective. The organizational plan and function to achieve similar success in the future have not been incorporated.

Conclusion: We confirmed that the ADRMS-H model is valid for disaster management, and, to improve it, we must add a medical assistance team headquarters.



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Changes in the Functions for Continued Healthcare Services during a Disaster

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Study/Objective: This study aims to identify the organizational functions that are needed to ensure continued health care services during a disaster. Moreover, this paper reveals the roles