

statements, two recommendations of a prerequisite of the on-site medical team, and two manuals concerning the treatment of gunshot and explosive injuries. Based on some of these statements, the Tokyo government has already enhanced the previous plan. **Discussion:** The AC2020 will propose the web site as a portal site and platform, disseminate the activities widely to society, and ask for the cooperation of other related organizations and academic societies. The AC2020 will aim to provide the landmark project of mass-gathering medical care in Japan as well as the transition to the Olympic Games in Paris in 2024.

Prehosp Disaster Med 2019;34(Suppl. 1):s156–s157

doi:10.1017/S1049023X19003534

Pharmaceutical Prescribing Patterns and Costs During Hurricane Harvey Shelter Operations in Dallas, Texas

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Introduction: Hurricane Harvey made landfall in southeast Texas in August 2017, causing unprecedented flooding throughout the Texas coastal region. Residents of affected regions were forced to evacuate to nearby unaffected areas, including Dallas, TX, where a large shelter operation was opened for 23 days to care for those evacuees. Retrospective evaluation of pharmaceutical prescribing patterns for the evacuees who self-presented to the Megashelter Medical Clinic (MMC) established in the shelter contributes to developing evidence-based planning strategies for healthcare delivery in the post-disaster setting.

Aim: To describe the pharmacy needs of a displaced population following a large-scale evacuation after a hurricane

Methods: De-identified prescription records written and filled at a shelter pharmacy were reviewed, looking at both cost and category of medications dispensed over time.

Results: Approximately 41% of evacuees with a total of 2,654 visits utilized the MMC clinic, resulting in 1,590 prescriptions filled with an associated cost of \$78,039. The most commonly prescribed drug categories were cardiovascular (21.2%), neuro-psychotropic (15.6%), infectious disease (12.5%), and endocrine (9.6%). While the most commonly dispensed were antihypertensives, diabetes treatment-related prescriptions, antibacterials, antidepressants, and NSAIDs, the costliest individual prescriptions were antiretrovirals and antipsychotics.

Discussion: Prescribing patterns for the MMC differed from normal prescribing patterns of a general population. Of the prescriptions dispensed at the MMC, pharmaceutical prescription patterns suggest the immediate needs of evacuees differ from later needs. There is a greater need for chronic disease management in the early phase of shelter operations, and an increasing need for neuro-psychotropic and infectious disease prescriptions over time. Understanding overall patterns of drug utilization over the duration of the shelter provides valuable insight on post-disaster medical resource utilization in evacuee populations.

Prehosp Disaster Med 2019;34(Suppl. 1):s157

doi:10.1017/S1049023X19003546

Pharmaceutical Relief Activities at Western Japan Torrential Rain Disaster

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Introduction: The torrential rain triggering massive flooding and hundreds of landslides was the worst weather disaster in Western Japan. A temporary pharmacy was established in the Kurashiki health center, which provided medicine to victims.

Aim: To evaluate the supply status of prescription under the health insurance system during a disaster.

Methods: When the enormous disaster occurred, victims get a prescription in the hospital or community pharmacy under the Disaster Relief Act or Health Insurance Act. Under the Disaster Relief Act, prescriptions that are given at a first aid station are able to be filled at the mobile pharmacies at no cost to the patient from the local government. Prescriptions that are issued by a medical institution, and are in accordance with the Health Insurance Act or National Health Insurance Act, can be dispensed at hospitals or community pharmacies. Patients may be exempt from the co-payment by being covered by their health insurance. Here, we investigated the supply status of prescription to affected people.

Results: The good points of the supply status were as following: 1) dispensing out of disaster area was a good system to relieve a pharmacist. 2) J-SPEED was also a good reporting system to provide appropriate medicine inventory management, and 3) sending prescription using a mobile phone was very useful for pharmaceutical activities. On the other hand, the points for improvement were as following: 1) more time to learn the medical insurance system during the disaster was needed, and 2) the mobile pharmacy is better to make the rounds of shelters including health care consultation.

Discussion: In case of a disaster, two different medicine supply systems cause confusion to medical relief teams. It is considered that collaboration relief activities with relief teams that included a pharmacist was very important.

Prehosp Disaster Med 2019;34(Suppl. 1):s157

doi:10.1017/S1049023X19003558

Pharmaceutical Services Preparedness of Military Units in an Institution of Brazilian Armed Forces

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Introduction: Military participation in humanitarian operations, both in cases of armed conflict and in response to natural

disasters, is a common phenomenon in several countries. In Brazil, the Armed Forces have a history in providing humanitarian assistance to victims of emergencies through their field hospitals, such as medical and dental care, laboratory and imaging diagnosis, and pharmaceutical services.

Aim: To verify pharmaceutical services preparedness of military units in an institution of Brazilian Armed Forces to disaster response and humanitarian aid.

Methods: A transversal study was carried out. The methodological approach was based on a logical model and indicators related to the preparedness of pharmaceutical services. Field research was carried out and good storage practices were investigated in loco. Key stakeholders were interviewed based on an open-ended questionnaire on the preparedness of pharmaceutical services. Interviews were transcribed and analyzed for overall content, according to analytical categories stemming from the literature and indicators prior defined.

Results: Key stakeholders of three military units were interviewed, and official documents and guidelines were also analyzed. Some pronounced shortcomings were identified, such as the lack of a specific budget for medicines management, no surplus of health supplies, lack of appropriate transports, and need of capacity building of health professionals and support team. The existence of a disaster plan, selection of essential medicines for primary reaction, forecasting of medicines, field hospitals as mobile and adaptable health structures, and a system for military mobilization are some of the strengths identified. Two military units are better structured in the management of pharmaceutical service. The third unit still needs to mature its processes to fit the health purposes of its mission.

Discussion: These findings can subsidize the improvement of pharmaceutical services' efficiency and quality in means of providing better response in emergency situations supported by the Brazilian Armed Forces.

Prehosp Disaster Med 2019;34(Suppl. 1):s157-s158

doi:10.1017/S1049023X1900356X

A Pilot Investigation of the Effect of Transport-Related Factors on Care Quality in a Moving Ambulance

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Introduction: Providing patient care in a moving ambulance can be difficult due to various transport-related factors, (e.g., accelerations, lateral forces, and noise). Previous research has primarily focused on cardiopulmonary resuscitation (CPR) performance effects but has neglected to investigate other care interventions.

Aim: To test a range of different care interventions during different driving scenarios.

Methods: A workshop with ambulance practitioners was held to create a list of care interventions to be tested. Two ambulance

practitioners were recruited to drive an ambulance on a closed test-track while performing care interventions on simulation models. Three driving scenarios of differing difficulty were used. Main outcome measures were estimates of workload using the NASA Task Load Index (TLX) and task difficulty. G-forces and video-data were also collected.

Results: Estimated workload increased overall as the difficulty of the driving scenario increased, as did task difficulty estimates. However, some care scenarios and interventions were affected less. For example, placing intravenous access increased greatly in difficulty, whereas saturation and blood pressure measurements had more modest increases. TLX scores showed that the primarily estimated physical workload and effort that increased, but also mental and temporal demands for some care scenarios. The more difficult driving scenarios primarily increased the variability of measured G-forces but not necessarily the overall driving speed, indicating that force variability is an important factor to study further.

Discussion: The study was intended as an initial pilot test of a wide range of care interventions. It will serve as input to future, larger studies of specific interventions and transport-related factors. Overall, this small pilot indicates that more interventions than only CPR should be studied in moving ambulances to investigate potential performance effects. This is important for traffic, patient, and work safety for ambulance workers and patients.

Prehosp Disaster Med 2019;34(Suppl. 1):s158

doi:10.1017/S1049023X19003571

A Pilot Study of Surge Capacity in the Metropolitan Area of South Korea

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Introduction: Seoul is the third most densely populated area in the world except for the city-state. However, a national disaster plan has not yet been established.

Aim: From September 2017, representatives of seven regional emergency medical centers in Seoul met monthly and decided to investigate basic data for the future establishment of surge capacity planning.

Methods: Staff, supply, space, and systems for surge capacity were surveyed in seven hospitals. The additional surveyed data were as follows: hospital incident command system and actual operational experience; performance of disaster drill; safety and security plan; estimation of surge capacity in normal operating conditions and extreme operating conditions; alternative therapeutic spaces; back-up plan to call non-duty medical staff; decontamination equipment; contingency plan for staff shortage; etc.

Results: All the hospitals reported they have hospital incident command systems and held disaster drills every year, however, the two hospitals (28.5%) had no real experience of hospital incident command system activation. Five hospitals (71.4%) did not have a safety and security plan. They replied they can treat average 7.7 emergency patients (Korean Triage and Acute scale