Culturally Sensitive Disaster Nursing Focusing on Pacific Rim Island Countries: First Report on Japanese Public Health Nurses

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Introduction: Providing culturally sensitive disaster nursing is essential to enhance survivors' resilience, especially in Pacific Rim island countries, which are home to 80% of the disaster victims of the world. Until now, most studies have focused on immigrant culture or language, and few have explored the idea of disaster nursing adjusted to the affected area's culture.
Aim: The study explores public health nurses' (PHNs) tacit knowledge regarding culturally sensitive disaster nursing focusing on the Pacific Rim island countries. This first report is the result of the study that clarified how Japanese PHNs, as relief nurses, considered the local culture to provide care to survivors in Japan.
Methods: Study participants were nine PHNs from seven prefectures, who provided care to survivors of natural disasters that occurred in 2011–2017 in Japan. Semi-structured interviews were conducted with questions such as, "Which culture did you consider while providing care to survivors in each disaster phase?" Data were analyzed qualitatively and inductively and were sorted according to the four disaster phases. The study was approved by the ethical committee at the National Institution of Public Health.
Results: In the acute phase, PHNs utilized close relationships between local residents and health care providers to collect information. They balanced local habits and the prevention of secondary health damage in the subacute phase; for example, balancing sanitation habits and prevention of contaminations. Additionally, they, as strangers to the community, played a role in alleviating tensions between residents under stress. During the recovery phase, they strengthened survivors' attachment to the area.
Discussion: PHNs dispatched from the outside of the affected areas must be culturally malleable to adjust their practice to the local context. Being strangers in an affected area can be advantageous if they utilize their position effectively.

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Current Status of the Japanese Disaster Medical Record

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Introduction: There was no common medical record used in disasters in Japan. At the 2011 Great East Japan Earthquake, medical teams used their own medical records instead of a unified format and operational rules. As a result, confusion occurred at the clinical practice site. The Joint Committee on Medical Records proposed a standard format of disaster medical records in February 2015. The Ministry of Health, Labor, and Welfare has issued the notification of states' use of a standardized medical record for disaster in 2017. It was confirmed that standardized disaster medical records were used by each organization in the 2018 Western Japan torrential rain disaster and the Hokkaido Iburi Eastern Earthquake, but the actual condition of those records was not clarified.
Methods: We sent a questionnaire to the local governments where the medical team worked in 2018 Western Japan torrential rain disaster and the Hokkaido Iburi Eastern Earthquake. In the questionnaire, we asked about the operation and management of standardized disaster medical records at the time of the disaster and also questioned future management methods.
Results: There was no use of other medical records. Standardized medical records were used in all records. All records were managed and operated by the disaster medical headquarters responsible for health care and welfare. Standardized disaster medical records were recorded on paper. Evacuees included patients who moved from shelter to shelter or to temporary housing to get better living conditions. That created difficulties transferring records since it was recorded on paper and stored in medical headquarters. Some returning patients were checked by several medical teams, resulting in the creation of several medical records of the same patient's condition. Future improvements and management of the recording process and record-keeping are required.

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Description Analysis of Primary Care Issues in Puerto Rico after Hurricane Maria: Results from Federal Medical Shelter Manati

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Introduction: In September 2017, Hurricane Maria devastated Puerto Rico's health care infrastructure. To meet the demands of ongoing primary care and medical emergencies, Federal Medical Shelters (FMS) were set up to serve local communities for the weeks after the hurricane. A team of health professionals from New York assisted federal authorities in the provision of healthcare in the FMS.
Aim: To describe the population of patients requesting medical care in the aftermath of Hurricane Maria at FMS Manati and to categorize the range of problems faced by patients after the hurricane, and examine how this changed longitudinally over the course of the operation.
Methods: Researchers collected basic data of patients at presentation to the FMS. Descriptive analyses were performed of the patient population and nature of presenting illnesses. Chi-squared analysis was performed to compare the change over

time of presenting complaints. Ethics approval was granted by Columbia University.
Results: Data was collected for a two-week period approximately three weeks after the hurricane made landfall. The FMS saw 2,154 patients over a 14-day period. The population of patients (median age = 43 years [IQR 39 years]) assessed was bimodal in distribution, with one peak in children at 1 year. A second peak occurred at age 53 years. 60.2% of presenting complaints were infection- or chronic disease-related. Musculoskeletal complaints were the third most common. Chi-squared tests revealed no statistically significant change in the frequency of specific types of complaints between the start and end of data collection.
Discussion: In the weeks after Hurricane Maria, infants and elderly were seen to predominantly seek medical care. Likely related to the collapse of the healthcare infrastructure, there was a high prevalence of infection-related and chronic medical conditions. The data support the need to focus resources to treat vulnerable populations, infectious issues, and chronic medical conditions.

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Description of Disaster Forms Usage in Health Cluster in Lombok and Palu Earthquake

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Introduction: The effort of medical and health services distribution requires data. However, the data and information were ignored in an emergency situation. For improving the distribution of data and information, the Center of Health Policy and Management, Faculty of Medicine, Public Health, and Nursing Universitas Gadjah Mada (UGM) developed forms based on Health Crisis Response Guideline by Ministry of Health 2016 and the World Health Organization (WHO).
Aim: Describing the implementation and development of forms based on Lombok and Central Sulawesi earthquake in 2018 for health cluster.
Methods: The form contains (1) a volunteer registration form; (2) a monitoring potential outbreak disease form; (3) health problem in health cluster daily report form; (4) a chronological situation form. This will be implemented in health policy-making by the Sulawesi district health office (DHO) and will be regularly analyzed in every week.
Results: North Lombok DHO, Central Sulawesi health office, and volunteers accepted these forms well. Periodically volunteers had reported their activity to DHO. All these reports contain many health indicators including environmental health. Reproductive health and health promotion. Implementation of this form in the other type of disaster in Indonesia is suggested.
Discussion: First, these forms are important to attach to the guideline of health crisis response in order to be accessed by all DHO. Second, all forms are printed documents. It needs to develop into data input and analysis applications.

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Deuce and a Half with a Twist: Repurposing Old Technology to Save Lives in Swiftwater Rescue during Urban and Small Stream Flash Flooding

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Introduction: Vehicles stranded in rising water account for the majority of swiftwater rescues (SWR) during urban and small stream flash flooding. Multiple simultaneous SWR incidents are commonplace during severe storms. Historically, SWR teams have pursued a "reach, throw, row, go" strategy. However, reach and throw attempts are usually futile. Boat operations and/or in-water rescue attempts can be technically complicated, time-consuming, and a drain on rescuer resources.
Aim: To design an ideal SWR modality for use during urban and small stream roadway flooding.
Methods: SWR objectives, strategy, and tactics were mapped against various transportation modalities to develop the safest solution for urban and small stream flood response.
Results: High water vehicles (HWV), such as the "deuce and a half" 6 × 6 military truck, represent a new standard for SWR practicality and safety as they can reduce rescuer time in-water. HWVs are heavy and high enough to be stable on roadways in most flash flooding conditions. A properly designed emergency response package includes a fording kit, multi-directional floodlights for nighttime operations, public safety radios, and a siren that doubles as a public address system to coach victims as a rescue is initiated. Deployable ladders enable rescuer egress from and victim access to a covered lighted cargo bed that holds PPE, throw bags, and rescue rings; a deployable "boat in a bag" for victims who require ferrying; and a heated seating area where medical evaluation can be conducted while staying dry.
Discussion: SWRs are dangerous resource-intensive incidents which account for more rescuer morbidity/mortality than all other technical rescue sub-types combined. These incidents will increase in frequency and severity worldwide due to climate change and overdevelopment. If rescue conditions are still tenable, HWVs are the most efficient and effective platform for conducting SWR from flooded roadways while decreasing safety risks to first responders and victims.

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Developing a Knowledge Program for Large Scale Prehospital Assistance During Disasters and Big Incidents

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Introduction: In the Netherlands, we started in 2016 with a new procedure for large scale medical assistance during a crisis. The normal daily assistance in the Netherlands is organized on a regional level, and we have 25 regions. These regions are far too small to handle big incidents, and cooperation is needed on a