

Discussion: Based on agreements on cross-border emergency assistance between Nordic countries in mass-casualty and other major incidents, the countries have developed national capacities to deploy response teams to neighbor countries for on-scene assistance and medical evacuation. Planning of necessary talk groups is in progress, and practical testing will be performed during the Barents rescue exercise hosted by Sweden in 2019.

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The Integration of a Unique QR[®] Code and Video to Improve the Correct Application of a Hemorrhage-control Tourniquet by a Naïve Population - A Feasibility Study

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Introduction: The use of tourniquets by the civilian population has been deemed a critical aspect of the initial response during an active shooter situation. Tourniquet deployment in public-access must be accompanied by education. Studies indicate that the act itself is not an intuitive process and enclosed instructions may be inadequate. However, civilians for diverse reasons may not avail themselves of accepted training programs.

Aim: To develop an alternative means of “Just-In-Time” education to enable a naïve responder to apply a commercial tourniquet efficaciously.

Methods: A video (~40 seconds long) was created highlighting the actual application of a C-A-T[®] (Combat Application Tourniquet) on a human model. It was uploaded to YouTube on a public channel. A QR[®] code was generated using <https://www.qr-code-generator.com>, embedding the link for the YouTube[®] video. An appropriately-sized QR[®] code was printed and applied with packaging tape (Scotch[®]) to the exterior wrapping of a C-A-T[®] device. The C-A-T[®] with code was then accessed with the iPhone[®].

Results: With the iPhone[®] camera app activated and focused on the C-A-T's QR[®] code, a request popped-up to open “YouTube.com” in Safari. When pressed, the full-screen video appeared immediately with audio of excellent quality.

Discussion: The use of a QR[®] code and its video link is a feasible option to provide “Just-In-Time” training to a naïve civilian population who are responding to an active shooter situation. This offers the naïve responder two options of immediate education: the enclosed instructions and the QR[®] code. Redundancy in communications is essential in any emergency response. An important limitation of this innovation is the inability to obtain Internet[®] access and therefore, the availability of the enclosed instructions is still critical. Research to prove that this innovation will allow the application of a tourniquet to proceed expeditiously with few errors is currently underway.

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Introduction of Japanese Association of Disaster Medicine (JADM) Disaster Medical Coordination Support Team

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Introduction: The Japanese Association for Disaster Medicine (JADM) Disaster Medical Coordination Support Team (DMCST) was formed in 2016 when Japan experienced Kumamoto earthquake to support other disaster medical assistance teams in terms of headquarter operation logistics.

Aim: Introducing medical association-based disaster medical support team.

Methods: JADM DMCST was formed by an association member who had experience in disaster medical headquarter operation and logistic support. Disaster medical headquarter tends to have a gap between acute phase and sub-acute phase due to an alternation of disaster medical assistance team. To keep disaster medical management at medical management headquarter, experienced manpower requires. JADM DMCST provided assistance to fill those gaps.

Results: For 2016 Kumamoto Earthquake, 107 members responded as a JADM DMCST, 78 members responded for 2018 West Japan Torrential Rain Disaster. Most of the members responded to the medical headquarter of affected prefecture's, city's, and medical region's headquarters. Members provided logistic support in headquarter operation, gathered medical needs information, helped medical team dispatch coordination, gathered evacuation shelter information, provided heat stroke support for evacuees, assisted deep vein thrombosis management, provided AED delivery operation, and helped statistical information analysis based on WHO standards.

Discussion: JADM DMCST could provide medical management support at each headquarters without time span restrictions which the most of disaster medical assistance team has. Since all members were experienced in disaster medical management, they could connect and keep providing medical assistance to the affected people. At the time of disaster, disaster medical management headquarter is always short handed due to a large amount of incoming information. All this information was managed by the support team. Although JADM DMCST contributed to support headquarter management, each member had to pay for his/her transportation, hotel, food and any devices required for headquarter operations. Therefore, improving member's responding condition is next problem to solve.

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An Introduction to Coastal Wilderness Medicine: BEACCHEs

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Introduction: Beginning Education at Central Coast Hospitals (BEACCHEs) was developed as an experiential

wilderness experience to assist with student exposure to new hazards when commencing at a coastal regional hospital. The coast has several hazards which are specific to the area.

Aim: To provide students with first responder education for situations commonly encountered on the Central Coast.

Methods: Sessions on first responder training specific to coastal and remote locations included: first aid and surf safety with the Ocean Beach Surf-Lifesaving Club and anti-venom education with the Australian Reptile Park. Education was provided regarding the transition from academic to clinical medicine including support and workload management. A two-day workshop was held on the Central Coast. Pre- and post-workshop surveys were conducted with a combination of matrix questions, Likert response scales, and long answer questions. Ethics was obtained. Both quantitative and qualitative responses were analyzed.

Results: Excellent feedback regarding this program was received. All students reported an increase in knowledge in all three domains of critical medicine and evacuation issues, student health and workload management, and Central Coast community and environment. The areas of greatest knowledge in each of these domains were the management of surf incidents, signs and symptoms of PTSD, and Central Coast marine and ocean environment. A confidence increase was seen in responding effectively to an emergency, particularly, in response to improvisation in the field. All findings were statistically significant with all P-values <0.01.

Discussion: The addition of BEACCHes to the orientation of medical students at the Central Coast Medical School has demonstrated to be an effective program for allowing students to adjust more quickly to the new clinical environment. Following the success of this program, BEACCHes is expected to become part of the new Junior Medical Officer orientation in 2019.

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Investigation of the Relationship Between Disaster Experiences and Disaster Measures: Potential for Specific Measures Against Disasters

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Introduction: Japan is known worldwide as an earthquake-prone country, and large-scale landslide disasters have occurred frequently in recent years. Early preparation is essential for taking precise action in case of an emergency. People with disaster experience are often discussed in the importance of evacuation drills. However, most people have no disaster experience, so awareness of disaster countermeasures is desirable for non-experienced people.

Aim: To clarify the concerns of non-experienced people and consider how to strengthen disaster measures as an evacuation drill host or educator.

Methods: From February to March 2018, we enrolled teachers and parents whose children attend Hiroshima City Elementary School. Based on disaster experiences, we divided them into two

groups, non-experienced and experienced, and a comparison of measures was performed between them. We used SPSS ver.22 and did a chi-square test.

Results: There were 1,702 valid responses (145 teachers and 1,557 parents); 1,406 were non-experienced, and 289 were experienced. The issues both groups were most concerned about were “children’s safety at school” (non-experienced 61.7%, experienced 57.3%), “securing food and drink at school” (39.0%, 3.3.9%), “acceptance and distribution of relief supplies” (28.1%, 2.6.6%), and “resident evacuation” (25.4%, 2.4.0%). The experienced were most concerned with “children’s mental care” (60.2%), and the non-experienced were most concerned with “children’s safety at school” (61.7%).

Discussion: Regardless of experience, parents tend to be deeply concerned about all things pertaining to their children. Physical safety, as well as psychological needs, were of high importance. For non-experienced, we should develop interest by focusing on children’s needs when writing manuals for disaster measures and evacuation drills. Therefore, future projects to strengthen awareness of disaster prevention for the non-experienced should focus on three key issues: “step-by-step approaches for children,” “physiological needs,” and “safety of schools and shelters.”

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Investigation on Level of First Aid Knowledge among Undergraduates

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Introduction: First aid in a short time is the key to saving lives. As undergraduates step into society, they should have enough ability to save others. As a result, first aid knowledge and training are essential for them.

Aim: To investigate the cognition level of the first aid knowledge among undergraduates, and to improve the training for undergraduates.

Methods: A questionnaire was designed for this study. It includes the basic information of the test subjects, attitude towards first aid, level of first aid knowledge, etc. The subjects of the questionnaire were mainly undergraduates in Sichuan province.

Results: There were 302 valid questionnaires. The percent correct of the first aid basic knowledge quiz was only 47.62%. Using Chi-Square tests to analyze, medical education can make a significant difference in the level of first aid knowledge. (Chi-Square=251.004, P<0.01) Additionally, 78.81% of undergraduates thought it was significant to learn and master first aid knowledge, and the most common way to learn first aid knowledge was through university (81.46%).