Chernobyl, earthquakes with tsunami, such as the 2004 Indian Ocean earthquake, and the September 11 terrorist attacks in the US.

Results: The skills that should be accustomed to are protection, prevention, diminution of toxicity, decontamination, as well as routine medical/surgical treatments. The relevant education is varied and not easily performed. For example, it was found that Japan DMAT or disaster medical assistant teams struggled with a lack of techniques to deal with the nuclear plant hazard during the above-mentioned Fukushima plant accident.

Conclusion: In the event of hazards including NBC/CBRNE, surgical skills are necessary. However, medical teams require training in advance. Surgical methods and other skills, intensive care, and examinations performed wearing PPE or personal protection equipment is important, as well as the safety and security of the medical teams, in addition, to supporting the vulnerable/weak victims, ensured using an Incident Command System.

Challenge for the Green Response: Reduction of Impact on the Environment by Emergency Medical Team

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Introduction: Environmental degradation and climate change can lead to humanitarian crises and undermine humanitarian operations. Therefore, Emergency Medical Teams should try to reduce environmental impacts.

Method: Collaborative development with companies was started by trimming the weight of tents, improving lights, and introducing renewable energy to our emergency medical unit to reduce greenhouse gas emissions.

Results: The mechanism of the medical tent, and materials was changed. The weight of tents was cut by 30%. The final goal is to develop an 8 x 6 meter tent which is set up by four women.

Light-weight and low-power tent light was created. It is 50% weight and 60% power consumption of our conventional light.

All the power of the emergency clinic was run by renewable energy. introducing a 1 x 2 m, 5,5kg solar panel that produces 350 Wh/day. If 18 panels were put on the tent roof, they produce 6,300 Wh. This is equivalent to the power consumption of a standard household in Japan, and it is estimated this can cover the power consumption of the patient department of the emergency clinic. Experimental tests will now be conducted.

Conclusion: Nowadays, even emergency medical teams are required to reduce their impact on the environment on the field. Therefore, trying to reduce the greenhouse gas emissions from the emergency medical team. The challenge is still on the way, but marching steadily.

Focused Needs Assessment and Tailored Training Pilot for Emergency Care Providers in Rwanda

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Introduction: In lower- and middle-income countries (LMIC), 45% of deaths could be prevented by implementation of emergency care systems. Prehospital care is critical for emergency medical services (EMS) worldwide, and basic affordable training improves EMS systems. This study conducted a needs assessment in addition to a tailored prehospital training intervention. Subsequent changes in prehospital care as well as patient outcomes were measured.

Method: Thirty providers identified through the prehospital medical command office participated. A prospective, non-randomized interrupted time-series approach was utilized for a needs assessment and training intervention. Data collected included age, gender, training level, and a knowledge assessment, and was used to create an 18-hour training, with immediate and 11-month posttests. Prehospital process indicators evaluated on-the-ground application of skills, including airway intervention, intravenous fluid administration, and glucose administration. Linked prehospital and hospital care datasets allowed for evaluation of patient outcomes.

Results: Of 30 providers, 60% (n=18) female and 40% (n=12) male, 19 were nurses and 11 were nurse anesthetists. Median age was 36 and median years providing care was 10 (IQR: 7,11). 24 (80%) participants completed immediate and post-test assessments, showing a 56% (95%CI: 36.2, 75.8) relative increase in mean knowledge score across 12 core skills that was maintained across post-tests. 324 of 572 total patients transported to the ED during the study were transported during the pre-training period (56.4%). Prehospital oxygen administration for patients with a saturation level of <95% increased pre- to post-intervention (66.7% to 71.7%; Δ = 5.0%; Δ95% CI: 1.9, 8.1%).

Conclusion: This study is the first LMIC-based prehospital provider training efficacy study that includes analysis of patient outcomes and clinical process indicators. Results offer important insights on Rwanda's prehospital care system and demonstrate that affordable, tailored educational interventions targeting process indicators have positive impacts on provider knowledge and practice.