high-performance medical container developed by Showa to fill the gap in medical care during a large-scale disaster, especially after the sub-acute stage.

Method: 1) Simulation of the damage to disaster center hospitals in the event of the Nankai Trough Mega Earthquake.

2) To clarify the feasibility of immediate response, a demonstration experiment was conducted by combining and installing ten units of medical containers.

Results: 1) Of the prefectures where the death toll from Nankai Trough Mega Earthquake is estimated to be 5,000 or more, 119 disaster center hospitals located in cities and towns with coastlines were examined to determine if they were in the tsunami inundation zone. The results showed that 44 hospitals, or about 37%, were inundated and their medical functions were likely to be paralyzed.

2) Ten containers of medical treatment rooms, ICUs, CTs, power supplies, and oxygen could be assembled in seven days. This is by far the shortest time compared to the more than two months it takes for a temporary hospital.

Conclusion: It is clear that medical containers can fill the void of medical care in the event of Nankai Trough Mega Earthquake.

Disaster Education in Hospitals using Metaverse: Focusing on COVID-19

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Introduction: During the COVID-19 pandemic, it became difficult to conduct face-to-face training and practice for disaster medial education. As an alternative to this, it was proposed to build a metaverse world using virtual and augmented reality(XR) technology and implement disaster training education within it. Therefore, the authors investigated the process and effects.

Method: The authors conducted training of healthcare workers through software implementing a metaverse called MediBase and NurseBase, which was created for doctors and nurses in hospitals to respond to disasters such as COVID-19. The trainees were given a practical orientation after basic theoretical education, attached a VR headset, and performed a medical response to a virtual disaster according to their judgment, and the records and debriefing were organized and analyzed.

Results: The satisfaction of trainees with education reached a maximum of 88%. Even in the part where the correct choice was made in the theoretical evaluation, the time was delayed or the wrong choice or behavior appeared in the metaverse practical education and training.

Conclusion: In disaster situations that cannot be implemented identically to reality and most disaster education and training that cannot target actual patients, metaverse-based disaster medical education and training is expected to become a more effective alternative in the future.

Emerging Technologies for the Early Location of Entrapped Victims Under Collapsed Structures and Advanced Wearables for Risk Assessment and First Responders Safety in SAR Operations, Search and Rescue Project

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Introduction: Natural disasters and catastrophes are challenges faced by emergency services. These are dangerous environments in which there are life-threatening victims as in other CBRN incidents, which can add great risks for nearby populations and the environment. The main objective of this project is the development and testing of new technologies that increase the safety and efficiency of the work of first responders in disasters.

Method: The SnR consortium, with 28 partners, has designed, implemented, and tested new technologies, with an advanced communication and monitoring system for professionals, victims, and other first responders, with innovative positioning and assistance ICT that facilitate the exploration and evaluation of disaster areas.

These technological advances are validated and evaluated with performance, efficiency, and usability indicators, in laboratories and in real working conditions, through a total of seven case studies, in seven different countries, covering a wide range of representative disaster scenarios.

Results: The development of a new communication and monitoring system for professionals and victims, coordinated on the Concorde platform, together with chemical alert sensors, synchronized with smartwatches, smart uniforms, and pediatric immobilizers, are some of the tools tested. The pilots carried out to confirm the usefulness of the 26 technological tools designed and tested in the field, which have helped to reduce the damage and casualties that can occur in S&R operations.

Conclusion: In conclusion, the H2020 European Search and Rescue project (S&R), through the development of new technologies, offers a holistic approach to the effective response to emergencies and provides increased capabilities and resources to first responders in the field, increasing their effectiveness and safety. This project has received funding from the European Union's Horizon 2020 research and innovation program under grant agreement (No. 882897).

Using Novel Technologies to Implement Belize's First Formal Prehospital Emergency System

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Introduction: Belize has no formal prehospital emergency medical system, leaving the majority of acutely sick and injured persons overwhelmingly dependent on private transport. To