

Invited Speech

Training facility design of confined space medicine:
Challenges and practices to introduce structural collapse search and rescue in Japan

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Abstract:

Urban Search and Rescue (US&R) response capabilities against structural collapse disasters needed to be prepared to save the lives of the victims trapped under rubble. In Japan, a national US&R response system has yet to be established, but the importance of introducing such a system became evident after two major structural collapse disasters: Kobe earthquake in 1995 and Amagasaki train crush in 2005. Some countries have already established their US&R systems, but to adopt them to Japan, there are some issues to be solved to suit the specific conditions in Japan. As examples, the systems, resources, infrastructure and training of national/state US&R response systems in the USA and California and of the UK's national USAR project are listed, and discussed with a view to identifying the key points of their implementations, and are compared with the case in Japan. Also, the content of training should be standardized and that the methodology of the configuration and development of the facility itself, its design data and reference dimensions be systematized. In addition, efficient training and verifying the contents of the activities requires ergonomic analyses of the dimensions of the activities within confined spaces. Considering the aforesaid, proposals are shown for US&R implementation strategies that need to be introduced in Japan.

Biography:

Akiko Yoshimura is a research fellow in the Medical System Safety and Resiliency Research Team in Earthquake Disaster Mitigation Research Center (EDM), National Research Institute for Earth Science and Disaster Prevention (NIED). After working as a regional and urban planning research engineer in National Research Institute for Land and Infrastructure Management, she started working on disaster mitigation in EDM, NIED. At the time, Hyogo prefecture was trying to construct Japan's first comprehensive training facility for Urban Search and Rescue (US&R). She joined the prefectural council and made a remarkable contribution in the planning and design of Hyogo US&R Training Facility. She has a continuous interest on the meaning of space and scale, and for the last two years, she has been working on grasping the meanings to responders of the sizes of Confined Space Rescue (CSR) and Confined Space Medicine (CSM) operation sites and of the scales of disaster sites, as a representative researcher of Grant-in-Aid for Scientific Research (B) KAKENHI 13910111 research work, and the reference data for designing US&R training facilities enabling effective trainings are collected. Recognition of her work includes an Award from Institute of Social Safety Science for excellent papers by young researchers.