

inating best scientific practices. The PACER is conducting several projects focused on five key areas of research: (1) preparedness theory and practice; (2) response networks; (3) analysis, modeling, and simulation; (4) science, technology, and engineering; and (5) education. In particular, the education research area has been tasked with developing an infrastructure to train disaster experts, from today's scientists to tomorrow's leaders in academia, health care, and public service. Furthermore, PACER has established eight principals around which research projects focus: (1) understanding high impact chemical, biological, radiological, nuclear, or explosive events; (2) conducting inquiries that serve the goals of the Department of Homeland Security and the National Response Plan; (3) providing relevance to first responders at all levels; (4) engaging all levels of government, public and private sectors for a fully integrated approach; (5) leveraging the diverse resources of partners to augment efforts; (6) developing educational programs and concepts for broad dissemination to train future leaders, experts, and scholars; (7) engaging appropriate efforts to achieve sustainability; and (8) maintaining flexibility, given the potential changing threats and the need to be prepared for all hazards.

This presentation will describe PACER's activities in furthering knowledge and understanding of high-consequence events and its ability to effectively deter and prepare for and respond to such events.

**Keywords:** disaster; preparedness

*Prehosp Disaster Med*

### Virtual Worlds and Modeling and Simulation Information Security in an Emergency Management Environment

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Recent technological advances in the gaming industry have now made it possible to leverage the Virtual World (VW) technology and use it as part of the modeling and simulation services in the preparedness and response training environments. Virtual World offers a slew of capabilities with the potential to solve aspects of information sharing, viewing, and collaboration across many jurisdictional boundaries. However, issues such as information security, specially in an emergency response environment, require attention. This presentation will discuss the VW capabilities and describes how such a capability may be used in a secured network environment to support preparedness and operations.

**Keywords:** emergency; emergency management; information; information security; modeling; simulation; Virtual World

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## *Military Aid in Civilian Disaster*

### How to Build a Mobile Field Hospital during Disasters: An Italian Model of Civilian and Military Cooperation and a Proposal for the Future

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During a disaster, local health services are overwhelmed, and damages to clinics and hospitals can render them useless. Damages to the healthcare infrastructure will further compromise the delivery of health services, therefore, many countries maintain mobile field hospitals in order to react during disasters. Lessons from past complex disasters (e.g., civil conflicts, wars, humanitarian emergencies) showed that field hospitals—civilian or military—play a significant response role during disasters.

The Italian Association of Alpini (ANA) model of mobile field hospital. It is a mobile, flexible hospital structure that provides self-contained, self-sufficient health care. The hospital can rapidly be deployed, expanded, or contracted, and can be engaged during a disaster to provide medical assistance. This field hospital supports the activities of civil protection in the national and international context, implements local emergency services, and enhances hospital bed surge capacity and treatment of mass casualties during disasters for a specific period of time.

The Hospital on Field of Alpines, was founded in 1976 and operates in Italy, with the aid of two major hospitals and civil protection in the national and international context. The hospital operates through the activity of volunteers that are experts and engaged in maxi-emergency and critical medicine, and are disaster specialists.

During disasters, there is a need for a rapid public health response for the treatment of victims and maintenance of a viable healthcare delivery system and for the prevention of new cases. Field hospitals (civilian or military) have been used successfully and now have a crucial role in supporting affected populations. In addition, it is suggested that a new form of civilian and military cooperation network for future medical response and preparedness be implemented in complex disasters.

**Keywords:** civilian; cooperation; disaster; Italian Association of Alpini; military; mobile field hospital; preparedness

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