

# Abstracts of Scientific and Invited Papers 15th World Congress for Disaster and Emergency Medicine

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## Oral Presentations—Topic 1: Civilian-Military Collaboration

Chair: M. Hoeyenbos

### Using Military Mobile Hospitals for Primary Care in Rural Areas of Saudi Arabia

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**Introduction:** This study examined the use of military mobile hospitals for the provision of primary care in rural areas during four years. The Military Medical Service Department was ordered to send mobile hospitals to many different rural areas to: (1) provide primary care and treat patients; (2) refer cases to a larger hospital if necessary, using air medical evacuation if needed; (3) search for diseases endemic in that area; (4) conduct medical research in the field; and (5) train the military medical staff to work in the mobile military hospitals.

**Methods:** Eight military missions took place at the mobile military hospitals from early 2003 to December, 2006. The average time in each mission was 14–21 days.

**Results:** The numbers, data, and analysis will be presented.

**Conclusion:** The advantages and disadvantages of using a military mobile hospitals in providing primary care services in the rural areas will be discussed. Whether these hospitals applied the principles of civilian-military cooperation in humanitarian aid also will be examined.

**Keywords:** civilian-military cooperation; mobile hospital; primary care; rural hospital

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### Aeromedical Evacuation in Greece: Flying Safely with Civil-Military Cooperation

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**Introduction:** Aeromedical evacuation is defined as air transport of a patient to/from one place to another place or medical unit, while under medical supervision. Flying safety is the main objective for a successful aeromedical evacuation system. Examples of safe flying in Greece will be presented.

**Methods:** An analysis of statistics from the National Center for Emergency Health Care (EKAB) and the com-

puter database of the EKAB Air-Medical Transport Office was performed. Greek, international air medicine literature has been reviewed. Internet information has been processed. **Results:** The history of civilian aeromedical evacuations in Greece began in 1954. Olympic Airlines Helicopters and Hellenic Air Force aircraft were used. The organization of a national air-medical transport network was established in 1991–1992. In 1994, the Air-Medical Transport Office of the EKAB was established. Olympic Airlines' helicopters and aircrafts were utilized until 2000. There after, evacuations were conducted exclusively through civil missions by EKAB helicopters (AGUSTA A-109E Power). However, use of this model was discontinued in 2003 due to three helicopter accidents with deaths (one in 2001, and two in 2002 over the Aegean sea). Since then, the aeromedical evacuation missions are operated by the EKAB, in cooperation with Hellenic Air Force. All subsequent missions have been completed safely.

**Conclusions:** Civil-military cooperation for aeromedical evacuation in Greece resulted in a 100% of transports performed safely.

**Keywords:** aeromedical evacuation; civil-military cooperation; Greece; safety

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### Mechanism of Emergency Relief and Responses by Military Sectors in Taiwan from the 1999 Chi-Chi Earthquake

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Taiwan is located on the circum-Pacific earthquake belt, and one destructive earthquake might be expected every 10 years on average. In 1999, the Chi-Chi Earthquake (local magnitude (ML) = 7.3), was the most devastating earthquake in Taiwan during the 20th century. As a result, the central part of Taiwan experienced many casualties and heavy property damage. The death toll was >2,500, and there was [US] \$10.7 billion of direct property damage and loss. The infrastructure destruction, such as lifeline systems, had a major impact on livelihood and economic activity. Immediately after the event occurred, the Ministry of National Defense issued an emergency mobilization order to deploy the supporting army troops and organize Commander Posts in the effected areas. At that moment, most of local governments were fully or partially paralyzed and telecommunications were interrupted. With efficient

mobilization and a variety of professional techniques, the military sectors made the main contributions to the affected areas at the primary stage. These contributions were in the areas of: (1) search-and-rescue; (2) medical treatment; (3) emergency sheltering; (4) emergency relief; (5) an information reporting system; and (6) basic restoration. The collaboration and cooperation with civil sectors like non-governmental organizations and non-profit organizations also sped up the procedure of recovery. This paper describes the process, plan, and deployment of military sectors in order to discuss the observations from the Chi-Chi Earthquake. The existing policy and plan of the Ministry of Defense for the emergency response to disasters also will be presented in order to depict the proactive participation in the preparedness for the next disaster.

**Keywords:** Chi-Chi Earthquake; emergency relief; military response; recovery effort; Taiwan

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### Civilian/Military Joint Cooperation in Humanitarian Assistance and Disaster Relief: The Experience of the Czech Republic

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Since the end of the Cold War, military intervention for the purposes of humanitarian assistance and disaster-relief often have been requested by political authorities. From the late 1990s, the Czech Military Medical Service has been involved in providing humanitarian assistance to developing countries. Due to excellent cooperation between the Home Office, the Ministries of Defence, Foreign Affairs, and Health, a complex project known as MEDEVAC was developed. This project was designed primarily for pediatric patients who have little possibility of receiving treatment from local medical facilities. A total of 97 patients have received comprehensive treatment (mostly surgical) in Prague Hospitals. These include 38 children from Iraq, predominantly with congenital heart diseases, and 10 from Pakistan, following the earthquake of December 2005. The Czech government established a special budget for this project. Military medical personnel performed selection and diagnostic procedures according to their field hospital capabilities. In addition, transportation was organized by the military. While the Ministry of Health guaranteed the provision of highly specialized health care providers, the Home Office solved the most complicated problem of identifying the immigration status for the children and their accompanying adults by granting them temporary asylum-seeker status. This presentation provides a detailed description of the point handling sequence and the coordination procedures.

**Keywords:** children; civilian/military; coordination; humanitarian; Prague; relief

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### Poster Presentations—Topic 1: Civilian-Military Collaboration

#### (1) Civilian-Military Collaboration in Training for Disasters

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**Introduction:** The Swedish Armed Forces are continuously engaged in various international missions that involve medical personnel that should be properly trained prior to the mission.

In 2006, the National Board of Health and Welfare requested that the Swedish Armed Forces Medical Center create a course that would provide training in medical care for provisional circumstances abroad, including damage control surgery.

**Methods:** Participants were handpicked from a pool of well-qualified doctors and nurses. Half of the participants were civilians and were selected by the National Board of Health and Welfare; the other half had military affiliations and were selected by the Swedish Armed Forces Medical Center. The course was conducted on a small island off the West Coast of Sweden, which only can be accessed by boat or helicopter.

**Results:** The limitations resulting from the isolated location and the provisional circumstances soon became obvious. All resources were limited, including water, electricity, drugs, blood products, disposable items, and radiology and laboratory resources. The course emphasized the importance of environmental factors, such as climate and personal safety. Medical evacuation capacity was relied upon.

**Conclusions:** The need for civilian-military collaboration and a course of this kind became apparent in Sweden after the 2004 Tsunami disaster in Thailand. The participants of the course all were satisfied, and this training concept will be expanded. The goal is to create a pool of well-qualified, highly trained and motivated professionals, who may become extremely valuable in future national or international disasters.

**Keywords:** civilian; collaboration; military; training; Tsunami

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#### (2) Use of Medical-Grade, Activated Carbons in Protection of Civil Population against Terrorist Actions

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The long-term use of medical-grade, activated carbons in the treatment of various diseases and conditions will be shared. Activated carbon is a universal antidote; it (1) is non-toxic—neither adsorbed nor metabolized by the body; (2) is the first choice when the nature of poisoning is unknown, as