US-Norway Military Telemedicine Collaboration—Evacuation Support System

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Introduction: There are many concerns to attend to in a military battlefield situation. A wounded soldier will need immediate treatment and transport to the nearest medical facility. The receiving medical facility should have information about the patient's medical history. The Command and Control (C2) units need to be aware of the overall situation. The soldier's commanding officer wants to know his medical status. Accurate medical records are essential for epidemiological research—many actors need information about the patient.

The US-Norway Telemedicine collaboration project has developed and tested a prototype solution called Evacuation Support System (ESS) that investigated:

1. Patient tracking using electronic "dog-tags";
2. Digital mobile documentation, providing "early warning medical information" to the medical treatment facility and "medical tracking" information to C2 units; and
3. Exporting standardized patient documentation to SANDOK EHR to ensure complete patient records

Method: The system was designed by SINTEF ICT in close cooperation with both Norwegian and US military medical personnel, and implemented by Cardiac AS. It was tested at Setermoen during exercise Interaction in December 2003. The system was evaluated using the Technology Acceptance Model, which includes observation logs, structured interviews, and questionnaires.

Results: The results from the evaluation showed that portable computing devices, electronic "dog-tags", and wireless communication can support and improve the work in a military evacuation scenario. The system must be: (1) robust and easy to use; (2) compatible with medical drills; (3) integrated with biosensors; and (4) integrated with existing communication infrastructures.

Conclusion: A system with electronic computing and communication devices will improve patient management in field environments and provide important information for C2 units if it is carefully designed.

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Keywords: collaboration; command and control; communications; documentation; dog tags; evacuation; information; medical records; military; telemedicine; support

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Terror—Psychological Aspects

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The target group for terrorists is not the victims, those who are injured or killed, but the population itself. The modern media play a key role by conveying dramatic impressions to the public. How much terror would there be without modern mass media?

The success criteria for anti-terror accomplishments not only should be the capacity to prevent terrorist attacks, but, rather, a decisive criterion should be that the population develops attitudes and coping strategies that make it psychologically resilient to effects of terrorism. There is no guarantee that any nation will succeed 100% in prevention of all terrorist attacks.

Results from Norwegian studies on different forms of terror will be presented. On the one hand, the Nacht und Nebel (NN) or Night and Fog Terror, such as against Televåg, resistance fighters and their families, consisted of methods to create maximum uncertainty about the fate of the victim. On the other hand, the effects of state-terrorism against the crews of Norwegian ships who were exposed in the Arab Gulf (1980–1988) were that the media conveyed impacts that caused significant stress reactions in the families at home in Norway. The findings show that both the NN-created uncertainty and the dramatic frightening events conveyed by the mass media, have an effect on families.

The resilience in a population appears to be dependent upon four conditions: (1) capacity for a realistic, statistical evaluation of the risk of a single person to become a victim of an act of terrorism; (2) a full understanding of what terror and terrorism is, its methods and goals; (3) society's capacity to prevent/handle acts of terrorism; and (4) the meaningfulness and acceptance of the risk in facing terror and terror threats.

Keywords: acceptance; attitudes; coping strategies; media; resilience; risk; terror; terrorists; uncertainty; victims

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A Global Infection—SARS: What Actually Happened in China?

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In November 2002, an outbreak of atypical pneumonia with unknown etiology started in South China, but took several months before being reported to the WHO and appropriate action was taken. The outbreak was unusual in having a very high attack rate among healthcare workers. A doctor from Guangdong Province, who stayed at a hotel in Hong Kong, was the source of an international spread of SARS. The global epidemic eventually affected more than 8,098 patients and caused 774 deaths in 26 countries. After the WHO's global alert on 12 March 2003, concerted efforts by the global scientific community led to the discovery of a new pathogen, the SARS coronavirus, within weeks. Diagnostic tools also soon became available. Traditional control measures including travel restrictions, increased surveillance, rapid identification, and isolation of cases were effective in containing the epidemic, and on 05 July 2003, the WHO declared that all chains of transmission had been broken. An animal reservoir of the virus is likely, and a crossing of the species barrier likely prompted the epidemic. The WHO warned of the danger of resurgence early in the post-outbreak period and four sporadic cases were identified in Guangdong late last year. Since then, laboratory workers have been infected in Taiwan, Singapore, and Beijing. Nine cases of SARS were reported (as of 07 May 2004) as a consequence of the Beijing laboratory outbreak that started in April, this year. Greater attention must be paid to biosafe-

ty in virology laboratories globally. SARS has provided important lessons for future epidemic containment and continued vigilance is essential.

Keywords: control; diagnosis; epidemic; epidemiology; laboratories; restrictions; severe acute respiratory syndrome (SARS); surveillance; testing; World Health Organization (WHO)

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Quality Assurance for Red Cross Volunteers in Finland

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A member of the Red Cross first-aid group can be participating in the activities for his or her own needs, just wanting to practice, or to maintain first-aid skills. A member also can assign himself to different tasks when needed. When a volunteer is hoping to practice or maintain his/her first-aid skills, the Red Cross cannot make demands on the quality; however, when the volunteer is bound for different tasks, the Red Cross demands an assurance of high quality.

An important element is that volunteers should be able to deal with a situation when something happens and provide help by using correct first aid, thus ensuring that a victim gets helped effectively.

Tasks can differ in different parts of Finland. Mainly, the tasks for the groups are: (1) first aid at large events; (2) first response as a part of the local emergency medical system; or (3) searches for missing people. In bigger accidents and catastrophes, volunteers can provide primary care (e.g., food, shelter, and psychosocial support).

Different tasks require different training. To ensure high quality when volunteers perform different tasks, the following recommendations must be considered: (1) all courses are valid for three years, and the instructors have to update their competencies every three years; (2) training courses have a competence-based approach: skills, behaviors, knowledge, and attitudes to perform a job effectively all are important parts of the courses; (3) all volunteers get continual monitoring, evaluation of their competencies, and assessment of practical skills; and (4) to get the certificate, the volunteer must perform skills in a competent manner that follow the guidelines.

As an example of the efforts of ensuring high performance quality among the volunteers, a study done last year will be described. The quality of basic life support was tested in recently trained volunteers and in volunteers in Uusimaa, who trained twice each month. Objective Structured Clinical Examination (OSCE), introduced by Harden and Gleeson,[1] has been proven to be both a valid and reliable method to test the practical skills of the students.[2] It was used in two different scenario-based training modes. The first scenario was a patient with ventricular fibrillation as the initial mode and the second scenario was a patient with asystole. A skills checklist was used to grade each pair. All together, 49 points were registered during both scenarios.

The important keys are to start action without hesitation and to build up the confidence of the performer during the training. The effects of frequent training of CPR-Defibrillator skills by lay persons could be seen when comparing the recently trained volunteers with a group of professional first aiders practicing every two weeks. The first aiders performed almost 100% correctly, which indicates the vital importance of continuous training and exercise of resuscitation skills.

The Red Cross requirements for volunteers who provide first-aid at big events are: (1) passing basic and advanced first-aid courses (16 + 16 hours); (2) passing a special first-aid course (12 hours) for the provision of first-aid at public events; and (3) being at least 18 years of age.

There are special courses for those who are planning the events, including risk management, communication, cooperation, etc. There are forms to ensure high performance quality among first-aid givers that provide information on how to make an agreement, what to monitor in the patients and that require all first-aid actions and observations of the patient be written down. Afterwards, the instructors provide feedback on how they performed and a plan on how to develop the skills further is produced. Continuous work for finding ways of better performances and better quality assurance is carried out, not only by the instructors, but by the whole organization in Finland.

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Keywords: cardiopulmonary resuscitation (CPR); competence; defibrilation; Finland; first aid; mass gatherings; performance; Red Cross; training; volunteers

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Nordic Cooperation in International Operations: Experiences from the Earthquake in Iran

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The main focus of this presentation was to determine how important well-functioning teamwork was in the field hospital provided by the Norwegian and the Finnish Red Cross following a major earthquake in Iran in December 2003. The area most affected was the ancient city of Bam, where 26,271 people were killed, approximately 30,000 were injured, and up to 75,000 were left homeless.

Given the scale and the scope of the disaster, the Government of the Islamic Republic of Iran and the Iranian Red Crescent Society (IRCS) formally requested international assistance. The IRCS provided a vital immediate response. In support of the IRCS, the International Federation of the Red Cross (IFRC) and Red Crescent Societies coordinated the deployment of an emergency response unit (ERU) field hospital. In addition, three basic healthcare ERUs, four water and sanitation ERUs, a logistic ERU, and a