

overall necessary trust required to be able to complete humanitarian missions, especially at the international level: The disasters created by the military far outnumber the ones they have prevented or assisted in.

The term CIMIC could be described as a new, institutionalized approach to developing a permanent strategic and tactical system that will facilitate provision of joint functions in scenarios involving both civilian agencies (local authorities and voluntary organizations) and armed forces. The concept creates both opportunities and threats. The most imminent threat is the absence of an endorsed definition of what CIMIC is or should be. NATO (the largest military alliance) has one definition; the United Nations has another. In addition, some national military forces have chosen to use modified versions of the NATO definition.

This presentation will discuss how these discrepancies may prevent future fruitful collaboration, and how they affect the trustworthiness of the parties involved. NATO may face the biggest challenge, as its definition seems to be unsatisfying to other civilian counterparts in the field of humanitarian assistance (governmental and non-governmental).

Conclusion: Civilians and the military have had many different kinds of relationships. If CIMIC is to be a new, institutionalized, agreed-upon "regulation," all threats and weaknesses of such a collaboration must be revealed and discussed to optimize the benefits that can be achieved from the use of all of the potential strengths and opportunities implied by its definition. An internationally endorsed definition is a minimum requirement.

Keywords: barriers; civilian-military; cooperation; definitions; humanitarian assistance; missions; opportunities; threats

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Advanced Technologies in Support of Military Medicine

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This presentation will address technology advancements applicable to battlefield medical requirements. The introduction of technology to battlefield environments is not always welcome. Acceptance of technological advancements by line and medical commanders is prerequisite to their use and directly related to their effectiveness. It is necessary both to train personnel in the use of advanced technology and to integrate the technology into unit functions. Time and persistence are needed to demonstrate the value of technology advancements and to adapt them to performance of unit missions.

Our current challenge is to identify, explore, and demonstrate key technologies and biomedical principles required to overcome technology barriers that are both medically and militarily unique. Technology developers must apply physiological and medical knowledge, advanced diagnostics, simulations, and effector systems integrated with information and telecommunications for the purposes of enhancing operational and medical decision-making,

improving medical training, and delivering medical treatment across all barriers.

The introduction of hardware refinements brings a new set of challenges and requires creative solutions. These include adaptation of platforms, overcoming of power problems, ruggedization and mobility; all subjected to field testing. Similarly, refinements in software will yield a dramatic increase in usable medical data and ease of transmission to the right sources.

Various portfolios of managed research will be described and their role in support of battlefield medicine explained. Specific applications will be made for homeland defense. Some of the topics of collaborative research include 3-D ultrasound, enhanced digital radiography, medical simulation for training, the use of sensors and detectors, the concept of an operating room of the future, robotics and medical informatics. Technology breakthroughs related to enhanced battlefield medicine will be demonstrated.

Keywords: battlefield medicine; military medicine; technology
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Advanced Technology and Medical Care The Russian System for Disaster Telemedicine

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The national on-line advice-giving support system for disaster telemedicine was developed in Russia in the autumn of 2001. In the first half of 2002, the system was used by personnel from the pediatric field hospital who had worked in the zone of the anti-terror operation in the Chechen Republic for 64 sessions. Advice was given for 54 patients with a wide range of diseases and traumatic injuries who ranged in age from two weeks to 56 years. Due to the counseling received by doctors via the telemedicine system, 46.2% of the difficult cases that required medical actions were carried out directly in the field hospital. The quarterly experience of continual employment of this system in the conditions of the regional public health services network disorganization (typical for natural disasters), local shooting wars, and prolonged anti-terrorist operations has shown its high potency for rapidly dealing with problems of diagnostics, medical tactics selection, and evacuation of the patients and victims in the specialized medical hospitals.

The DVB/RCS channels of the Russian satellite system with combined access to HeliosNet created the communications environment. The high-speed DVB channel used in the direction from the Telemedicine Center in Moscow to the hospital and low-speed simplex, point-to-point reverse satellite channel were able to support on-line advising sessions by means of an asymmetric, duplex IP-connection.

Keywords: advice; Chechen Republic; consultation; diagnostics; disaster; evacuation; field hospital public health; Russian; tactics;