A September 2012 conference in Naples, Italy, brought together physicians and other medical care providers to discuss the newly emerging specialty of disaster medicine. The focus was on civil-military cooperation in disasters and especially NATO operations in the last few years. Participants and speakers included many from former Eastern Bloc countries. This conference was significant for sharing information about existing training programs and institutions which have already focused on disaster medicine, in some cases, for decades. The summary below was compiled by Col. Rostislav Kostadinov, MD, PhD, Colonel, Bulgarian Armed Forces, JFC HQ Naples, NATO Joint Medical Coordinator. - J.W. Terbush, MD, MPH, CAPT MC USN

Summary of the International Scientific Conference "Civil Military Cooperation Enhancing Combat Trauma System and Disaster Medical Management Capabilities"

Held September 12-14, 2012, Nunziatella Military School, Naples, Italy

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The last several decades have recorded a dramatic increase in the frequency and severity of man-made and natural disasters. Climate change and technological developments create new sources of disaster. Population growth contributes to the severity of disasters' impact, and emerging infectious diseases present new challenges to crisis managers. With globalization, society is becoming more complex and interdependent. Medical science and technological development have significantly increased the capabilities and capacities of the disaster response community over the last 20 years.

Despite the fact that rescue and medical teams are becoming more professional and better skilled, the modern world is seeing an inexorable rise in the impact of disasters. Faced with more intense, frequent, and complex impacts, there is a pressing need to conduct research into sources of hazards, vulnerability and risks, planning and organization of disaster medical support, and required cooperation/coordination between rescue teams and organizations during disaster medical response execution. There is also a need to better disseminate the results of this research and use them for the purposes of reducing or coping better with the threats and risks. There is clearly a growing interest among scientists in many countries for new approaches to disaster medical support management. Consequently, the international community is paying increasing attention to enhancing national capabilities for disaster response and reducing population vulnerability in case of calamities.

Proactive and timely civil-military medical cooperation and coordination of activities is an example of measures aimed to reduce disasters' impact. In convening the international scientific conference, "Civil Military Cooperation Enhancing Combat Trauma System and Disaster Medical Management Capabilities" (CMCECTSDMMC-2012), the Italian Military Medical Service understands the need for scientific discussion on medical coordination and cooperation issues, international exchange of information and best practices, disaster medical support plans, and standard operating procedures.

The CMCECTSDMMC-2012 international organizing committee defined the key topic areas for the conference, namely: national civilian and military medical services in disaster management; international coordination in disaster medical management; multinational experience in disaster relief operation; and civil-military cooperation in training, planning and execution of disaster medical support.

A total of 100 members of national and international military medical services, military logistic commands, civilian medical entities, academia, and other experts attended the conference, representing eight countries of Europe and America, non-governmental organizations (NGOs), businesses, and international organizations. In accordance with the CMCECTSDMMC-2012 agenda, six scientific sessions ending with panel discussions, a poster session, and three round tables were organized. There were 54 oral presentations and 15 poster presentations made

on the four key topic areas of the conference. Forty-five interventions were made at the roundtables and panel discussions. The scientific sessions were organized in the following panels: "Italian Military Medical Experience in Disaster Medical Management and Support"; "Italian Civilian Medical Experience in Disaster Medical Management and Support"; "National Medical Experience in Disaster Medical Management and Support"; "Multinational Military Medical Experience in Disaster Medical Management And Support"; "Clinical and Organizational Aspects of Disaster Medical Support"; and "Disaster Medical Management and Support – Education and Training." During the last panel, "Civil Military Medical Cooperation in Disaster Medical Management and Support – Way Ahead," a summary of the key conclusions, assessments, and proposals made was presented for final discussions.

The conference presentations on "Italian Civilian and Military Medical Experience in Disaster Medical Management and Support" represented experience gained by the Italian Armed Forces and Italian healthcare system during medical support to the disaster relief and humanitarian operations in Italy and abroad.

Moderators and delegates of the conference noted that:

- Civil-military cooperation in medical support to an Italian army-led disaster relief operation was executed in various calamities and proved to be efficient and effective.
- Italian military medical entities have capabilities and are ready to provide support to civilian healthcare providers when requested and where required.
- The capabilities required for disaster medical support differ from those for medical support to military operations.
- The established civilian and military medical standard operating procedures (SOPs) in case of disaster medical support coincide in their majority.

When discussing the issues of Italian civilian and military medical support in disaster relief and humanitarian operation, the moderators of the panels concluded that achieving better preparedness and more efficient medical support requires several challenges to be addressed:

- Better coordination and information exchange between civil and military medical services is required.
- The radiological health risk management and mitigation needs further study and protocols clarification.
- The differences between trauma system and combat trauma system could form the basis for development of both systems.

The discussion at the conference indicated that in Italy, at least, civil-military medical cooperation during disaster relief operations is not a top national priority. The significance of the problem is also underestimated by healthcare authorities in many other countries. During the panels "National Medical Experience" and "Multinational Military Medical Experience in Disaster Medical Management and Support," several speakers noted that civil-military medical cooperation issues should be incorporated in national development plans and into the planning of the international organizations as well.

Delegates of the conference also noted that international organizations and individual countries have already accumulated a large amount of data and experience and highlighted the following:

- The majority of nations have a similar national approach to disaster medical support:
  - Disaster medical support is under the lead of civilian healthcare authorities.
  - There is a need for specific training, specialties, and equipment for disaster medical support provision.
  - National coordinating systems are complicated and relatively slow, and coordination and cooperation between the actors have to be improved.
  - A shortened response timeline for capabilities and resources allocation and transportation will increase the efficiency of the medical support.
- During medical support to disasters and humanitarian operations, cooperation with governmental organizations (GOs), non-governmental organizations (NGOs), and international organizations (IOs) is required and has to be broadened.
  - National and international medical communities' level of ambition in this regard is high, but there are several obstacles and challenges to be addressed and differences to be overcome.
  - Despite different cultures, environments, and experience, all the rescue and humanitarian actors have a common goal and similar tasks.
  - The best way for convergence is sharing of the capabilities and information.
  - Medical information exchange is an achievable and realistic bridge.
- NATO possesses civilian and military capabilities that could be utilized after approval and in a supporting role. The experience and organization of the medical support team in the NATO environment could become a basis for international medical support solutions development.
- Multi-nationality and close cooperation between players in medical support to devastating disasters will reduce the overall financial burden and enhance national capabilities.
- Elements of military medicine could enhance the disaster medicine capabilities – C4I (command, control, coordination, cooperation, and information), SOPs, triage, treatment, and evacuation principles, to mention just a few.

- Focused education and training could reduce population vulnerability and increase the possibilities for better medical preparedness and responsiveness.

During the panel "Clinical and Organizational Aspects of Disaster Medical Support," conference delegates agreed that every effort should be made to bridge the gap between the patients' need for emergency life, limb, and eyesight-saving medical assistance and the populations' expectation of medical best practices, recognizing the relative paucity of medical means and capabilities available.

In concert with reducing the populations' vulnerabilities and enhancing the rescue teams' preparedness, the conference stressed that education and training are key to reducing disaster risks. The presentations and discussions in the panel "Disaster Medical Management and Support – Education and Training" emphasized:

- The requirement for medical students to be better prepared for the challenges of medical support to military operations.
- Make transparent the objectives and tasks of the proposed master-level program in military medicine.
- Describe the different approaches for students to be better prepared for disaster relief and humanitarian operations medical support:
  - Disaster medicine courses in the medical universities' programs and postgraduate specializations.
  - Trauma care courses for surgical specialties.
  - Major Incident Medical Management and Support advanced course.
  - Forward medevac course for military medical officers.
- The requirement for common standard operating procedures for civilian and military field hospital organization and management in case of disaster relief operations.
- The requirement for advanced technologies implication in the training process.
- The essential need for preventive measures in disaster response planning and execution.
- The significance of rescue teams' safety training and research.
- The need for disaster medicine national systems to be focused on research and education not only of medical professionals but also trainers and therefore the continuity of disaster medicine education.
- The requirement for acquired knowledge to be shared between countries for the benefit of their training and educational programs.
- The option for NATO to play a greater role in prevention and preparedness for disaster medical support management by sharing its experience in multinational medical support provision in austere and hostile environments.
- The utilization of all available databases and trauma registries in disaster response planning and execution.
- The healthcare system needs to be more resilient in case of disaster which is an objective of the preparedness process.
- The importance of the fitness and training of the emergency care providers.
- Familiarization of all healthcare providers with their own community plan for disaster response and their training to fulfill their specific duties according the planned activities.
- The exploration of all possible means of education, from online courses to postgraduate master programs and specializations.
- The recommendation that disaster medicine concepts and principles be included in all medical residencies.
- That to be educated means to be ready.
- A base of knowledge for disaster medical support has to be included in the theoretical and practical surgical courses.

During the final panel, all these issues were discussed, and the delegates reached consensus and provided, in return, some proposals for achieving better civil-military medical cooperation in the provision of medical support to disaster relief and humanitarian operations:

1. With regard to civilian trauma systems and combat trauma systems, the similarities between the two systems as their common objective could form the basis for common education and training of civilian and military healthcare providers.
2. It is highly desirable that the specialty of disaster medicine enter into the Italian civilian and military medicine educational programs.
3. Disaster medicine education should be continuous over a person's career.
4. Specific medical training in assuring rescue teams' safety has to be planned and executed.
5. The integration between civilian and military medical systems' disaster response planning and execution is required.
6. The requirement for realism in disaster medicine education and training processes' length and content was noted.
7. The role of international organizations such as NATO in supporting educational, training, planning, and execution of disaster medical support management was highlighted.
8. The interoperability between civilian and military medical equipment and standard operating procedures has to be addressed.

9. As a final conclusion, there is a requirement for better information exchange in health risk evaluation and common disaster medical response planning with clear and transparent command, control, communication, and coordination between military and civilian medical entities.

10. The delegates proposed establishment of International Civil-Military Medical Board in order to prepare proposals to the civil and military medical authorities for educational, training, and planning measures to be implemented for assuring better disaster medical support management preparedness

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