

NATO ADVANCED TRAINING COURSE

Integrated Emergency Management for Mass Casualty Emergencies

UNIVERSITA' DEGLI STUDI DI FIRENZE



Wednesday 26th to Saturday 29th October 2011

Venue: Villa La Quiete alle Montalve, via di Boldrone 2, 50141, Florence, Italy



*This activity
is supported by:*

The NATO Science for Peace
and Security Programme

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SCIENTIFIC COMMITTEE

Prof. David Alexander, University of Florence, Italy, Chairman

Mr Chaim Rafalowsky, Magen David Adom in Israel, Co-Chairman

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Prof. Rosa Valanzano, President of the Degree Course in Medicine and Surgery, University of Florence, Italy

Prof. A. Raffaele De Gaudio, University of Florence, Italy

Prof. Sergio Boncinelli, CESPRO, University of Florence, Italy

Dr Alessandra Rossodivita, San Raffaele Hospital, Milan, Italy

Dr Eric Noji, Consulting Medical Epidemiologist & former Chief International Emergency & Refugee Health Program, Centers for Disease Control and Prevention (CDC), USA

Mrs. Laura Mugnai, University of Florence, Italy

PROGRAMME OF STUDIES

First day – Wednesday 26th October 2011

08:00-08:30 Registration

08:30-10:00 Inaugural speeches

GIAN FRANCO GENSINI

Dean of the Faculty of Medicine and Surgery, University of Florence

ALBERTO TESI

Rector of the University of Florence

PAOLO PADOIN

Prefect of Florence

DANIELA SCARAMUCCIA

Regional Councillor responsible for Healthcare

Integrated perspectives on emergency response: introduction and principles

10:00-11:00 A global perspective on integrated emergency response
David Alexander, University of Florence, and Chaim Rafalowsky, Magen David Adom in Israel

11:00-11:30 **Coffee break**

11:30-12:30 An emergency planning and management perspective
David Alexander, University of Florence

12:30-13:30 A training perspective
Chaim Rafalowsky, Magen David Adom in Israel

13:30-14:30 **Lunch break**

Planning integrated responses to major events in the future: national and local perspectives

- 14:30-15:30 Clinical risk Management in mass-casualty events
Francesco Venneri, Clinical Risk Manager, Azienda Sanitaria 10 Firenze, Italy
- 15:30-16:00 **Coffee break**
- 16:00-17:00 Classroom exercise and discussion on integrated response to hazards
David Alexander and Roberto Miniati, University of Florence
- 17:00-17:30 Brief tour of the emergency management facilities, City and Province of Florence
David Alexander, University of Florence, Luigi Brandi, in charge of Civil Protection Office City of Florence, and Colleagues
- 18:00-19:30 **Reception for speakers and foreign delegates**

Second day – Thursday 27th October 2011

Planning integrated responses to major events in the future: domestic and international perspectives

- 09:00-10:00 Integration of medical response with other aspects of assistance
Divide Colombo CRIMEDIM - University of Eastern Piedmont, Italy
- 10:00-11:00 The role of Hospital in the international disaster response
Pierluigi Ingrassia, CRIMEDIM - University of Eastern Piedmont, Italy
- 11:00-11:30 **Coffee break**
- 11:30-12:30 Optimal fluid administration in emergency situations
A. Raffaele De Gaudio, University of Florence, Italy
- 12:30-13:30 **Lunch break**
- 13:30-14:30 Mass casualty fluxes and patient care issues in disasters
Jeffrey Arnold, Santa Clara Valley Medical Center, USA
- 14:30-15:30 Medical system integrations and the hospital response to mass casualty events
Alessandra Rossodivita, San Raffaele Hospital, Italy
- 15:30-16:00 **Coffee break**
- 16:00-16:45 Civil-military collaboration and integrated response
Eric K. Noji, CDC, USA
- 16:45-17:30 Integrating humanitarian operations
David Alexander, University of Florence, Italy
- 20:00-22:00 **Conference dinner (individual payment)**

Third day – Friday 28th October 2011

Integration of response to hazards and crises

- 09:00-10:00 Mortality and morbidity scenarios for natural hazards and associated response needs
Eric Noji, CDC, USA
- 10:00-11:00 Medical system integrations and the hospital response to mass casualty events
Jeffrey Arnold, Santa Clara Valley Medical Center, USA
- 11:00-11:30 **Coffee break**
- 11:30-12:30 Hospital response and natural disasters
Roberto Miniati, University of Florence, Italy
- 12:30-13:30 **Lunch break**
- 13:30-14:30 An integrated response to terrorism incidents: intelligence, civil defence and emergency response
Eric Noji, CDC, USA
- 14:30-15:00 Integrated response to CBRN mass-casualty events
Emanuela Masini, University of Florence, Italy
- 15:00-15:30 Nuclear Approach
Antonio Santoro, Army Medical Corps- Brigade general, Italy
- 15:30-16:00 **Coffee break**
- 16:00-17:00 Pandemic emergency planning: medical and non-medical approaches and their integration
Alessandra Rossodivita, San Raffaele Hospital, Italy
- 17:00-17:30 Medical students as a new resource in hospital mass-casualty events
Marco Mangini and Francesco Grossi, University of Florence, Italy

Fourth day – Saturday 29th October 2011

Case histories and lessons to learn

- 09:00-09:45 Emergency medical management in the 2004 Madrid train bombings
Alejandro Lopez-Carresi, Madrid
- 09:45-10:30 Analysis of the 2009 Earthquake of L'Aquila, Italy
Massimo Casacchia, University of L'Aquila, Italy
- 10:30-11:15 Analysis of the 2005 London bombings
David Baker, Health Protection Agency, UK
- 11:15-11:45 **Coffee break**
- 11:45-12:30 Integration of responses to the Polonium poisoning incident in London
David Baker, Health Protection Agency, UK
- 12:30-13:30 Discussion
- 13.30-14.30 **Lunch Break**
- 14-30-17.00 Interactive Didactics:
"Auxilium" Simulation game
designed by *Luca Gorrone, Police Officer, Prato*

SPECIALISTS

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2. CHAIM **RAFALOWSKY** (as above)

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NATO ADVANCED TRAINING COURSE

Integrated Emergency Management for Mass Casualty Emergencies

Florence, Italy, 26th-29th October 2011



The essence of good emergency management is to ensure the efficient deployment of resources in the light of immediate and pressing needs. This requires effective co-ordination of a wide variety of organisations and agencies which either do not normally work together or seldom do so under the particular conditions of an emergency situation. Rescue, triage, medical care in the field and in trauma centres, transportation and logistics, epidemiological monitoring, disease control, the maintenance of public health, toxicological testing of dangerous conditions, and so on, all require concerted action by a broad spectrum of forces.

Such is the wide variety of political and administrative systems in different countries that there will probably never be a standard or universal system of civil protection (i.e., of emergency management). However, there is a pressing need for greater international collaboration. This exists in part because the threats posed by terrorism, epidemics and climate change are likely to create more trans-national disasters in the future. It also reflects a common and well justified desire to collect, share and utilise information on the experience of managing emergencies in other countries. Finally, there are common principles of emergency management and they need to be debated, refined and shared. Hence, we should be moving towards a system in which there is a common culture of civil protection and a sense of shared values and procedures. This can be achieved in significant measure by sharing knowledge through advanced training. The process will not impede national and regional developments but should instead enable systems to be designed that achieve the best possible fit with local conditions. The course will also enable practitioners and lecturers to share best practices and lessons learned from different countries, situations and environments in the emergency medical response field.

Emergency planning should be a participatory process that facilitates collaboration. Generally, individual organisations have their own procedures and protocols for responding

to crises and emergencies, but the weak points are found in unfamiliar forms of collaboration between the various forces that must work in the field when calamity strikes. A particular area that would benefit from improved methodology and a greater sense of shared values is the collaboration between health systems and other emergency responders in the case of mass-casualty events.

In the modern world there are considerable risks of mass casualties caused by intensified or emerging risks, such as the following:-

- epidemics or pandemics of SARS or avian influenza
- terrorist attacks with mass casualties (bombs or shootings)
- non-conventional CBRN terrorism with mass contamination or infection
- major impacts of windstorms, floods, landslides and sea surges associated with intensified climatic phenomena.

To these should be added the ever present risk of major earthquake, tsunami or volcanic eruption, with possible mass fatalities and widespread injury and entrapment.

This advanced training course is an initiative of several institutions. The first is the Prevention and Protection Service of Careggi Hospital in Florence, a general medicine and university health facility and the fourth largest hospital in Italy. The second is CESPRO, the University of Florence's Centre for the Study of Risk Conditions and Civil Protection, which is in the process of founding an International Institute for Crisis and Security Studies and is also based at Careggi Hospital. The Mediterranean partner country institution is Magen David Adom (MDA), the Israeli national EMS society and member of the International Federation of Red Cross and Red Crescent Societies. MDA is one of the premier organisations for emergency medical response and has extensive international connections that reflect its reputation as a leading source of expertise on crisis and disaster response. MDA has vast experience, in preparing for and responding to multi-casualty incidents, especially those caused by terrorism. Its response is closely co-ordinated with other responding agencies, with respect to the preparedness phase as well as the emergency period. MDA also has great experience in preparing for mass toxicological incidents.

The course will develop comparative methodologies designed to improve the collaboration between health systems and other emergency services when responding to sudden catastrophic events that have the potential to result in mass casualties. We see the connection between health systems and emergency services as a possible weak link during emergency situations and methodology needs to be disseminated that will help strengthen it, with the specific aim of ensuring that health needs are efficiently tackled during the period of crisis.

The key words in this process are integration, interconnection and inter-operability. These concepts require a shared culture and language of civil protection, with a specific emphasis on mass casualty management. For full international implementation, they also require the propagation of training concepts and methods in a wide variety of different countries.

There are several additional imperatives. First, experiences (for example in Madrid, March 2004 and London, July 2005) show that terrorist outrages are capable of causing damage to all vital systems in the human body and hence that medical aid has to be brought to the scene of the incident in increasingly sophisticated and timely forms. This has created, not only a medical logistics imperative, but also a pressing need for efficiency in the collaboration between the various emergency services.

Secondly, a European pandemic would have profound consequences, not merely for health and the maintenance of safe conditions in medical facilities, but also for all forms of social participation, which would greatly complicate the emergency response, and possibly reduce its efficiency.

Thirdly, a major natural disaster could lead to complex and widespread demands for search, rescue and field-based medical care that would require a higher order of organisation than that applied in smaller disasters.

Finally, any form of radioactive leak or CBRN contamination could lead to lasting consequences for environmental health, which would be added to possible mass casualties and the difficulty of managing these in a contaminated environment.

In synthesis, the operating circumstances in a major European disaster could be complex, challenging and replete with demands for integration.

The process of providing a concerted approach to such events will require integration vertically between levels of government and their associated services, and horizontally between different forces and agencies. For example, in the case of terrorist incidents, intelligence services and the forces of order must work closely with medical and health protection agencies.

The advanced training course will be structured around the following themes:-

- Description and analysis of best practice in the provision of medical, sanitary and health care in the wake of sudden-impact disasters, crises and incidents, with special focus on abrupt natural disasters (including the effects of climate change), epidemics and terrorism of the conventional or CBRN kinds.
- Discussion of common principles for the efficient integration of medical and non-medical forces in the response to mass-casualty incidents in Europe.
- Debate and exploration of the potential for improved response to such incidents.
- Discussion of how to involve stakeholders in the improvement of emergency management, and how to strengthen international participation in disaster response.

The following are some of the topics that will be addressed:-

- on-scene procedures of medical providers at the site of the incident or disaster (triage and treatment), co-ordination with other responding agencies, and co-ordination with admitting hospitals
- emergencies within hospitals (fire, flood, structural damage, contamination, facilities overwhelmed, etc.)
- integration of the medical response system between and among medical centres and field response units
- integration of emergency response between health systems and hospitals, on the one hand, and the non-medical components (fire brigades, volunteer rescuers, technical services, transportation systems, emergency planners, etc.)
- efficient use of advanced medical posts (first aid posts) and field hospitals in major incidents and disasters
- development of new procedures for dealing with the health and medical aspects of emerging risks (epidemics, CBRN incidents, climate-change effects, etc.)

- efficient surveillance and monitoring of epidemiological conditions in major disasters
- improvement of plans and procedures for dealing with mass fatalities
- improved cross-border collaboration for medical emergencies
- integration of military assistance to civil authorities (MACA) and military assistance to civilian communities (MACC) with civilian emergency response
- integration of international organisations (e.g. the Red Cross) into the response to major emergencies.

David Alexander, Chaim Rafalowski