

1 million assays. The LRN has a dual function, since the introduction of advanced technology and training into the nation's public health laboratories has facilitated the response to emerging disease threats such as SARS.

**Keywords:** anthrax; bioterrorism; bio-threat; Center for Disease Control and Prevention (CDC); civil-military cooperation; laboratories; Laboratory Response Network (LRN); public health; system; testing

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### New Concept for Multi-disciplinary Crisis Management

*Brigadier Dag Hjelle, MD*

Norwegian Armed Forces Medical Center

After the end of the cold war era, new conflicts and challenges have been brought upon us. The threats from international terrorism are among many challenges to our preparedness systems. Others types of crisis, as the SARS epidemic, also must be handled. All together, there is a large variation in the types of threats that range from civilian accidents to full-scale war. How do we cope with such threats in a trustworthy way and within reasonable budgets?

Many of these threats have medical implications. The Norwegian Armed Forces Medical Services together with a large civilian medical institution, Ullevaal University Hospital, has constructed a new concept in which medical resources, both clinical competence and laboratory services are put together in a way that they can support civilian medical operative needs, military medical operative needs, and at the same time, support decision makers in both the civilian and military chains of command. The focus has been on operative usefulness, to facilitate flexible and scalable reaction abilities, and also to enable pro-active responses. In principle, each unit works along three lines, one operative civilian medical line, one operative military medical line, and one linked to the military and civilian chains of command through a medical operations centre. The main resources linked directly to the centre is medical microbiology / infectious diseases management (ability to isolate patients in an isolation centre at P3 level and a diagnostic laboratory at P3/ P4 level), toxicology, psychiatry (crisis management, psychological trauma care), trauma care (surgery and emergency medicine), radiation medicine, and a military medical operations centre linked to the civilian emergency response system. The system also is linked to a medical intelligence cell and the medical preparedness branch within the Armed Forces Medical Services.

**Keywords:** chains of command; civil-military cooperation; command and control; crisis management; emergency response system; Norwegian Armed Forces; terrorism; threats

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### Civil-Military Cooperation in Responding to the Anthrax Attacks in 2001

*Major Tony Littrell, MD, MPH*

Chief, Field Operations & Intelligence, USAMRIID (United States Army Medical Research Institute of Infectious Diseases, Fort Detrick, Maryland, USA)

In October of 2001 at least four letters containing anthrax spores were mailed to various prominent figures in the United States government and media organizations. What followed is perhaps the largest bioterrorism investigation and public health response in U.S. history. Physicians and scientists from the United States Army Medical Research Institute of Infectious Diseases (USAMRIID) played an important role in responding to this public health emergency. This session will highlight the cooperation and lessons learned between civilian public health organizations and USAMRIID employees. We will also discuss what actions can be taken to improve cooperation and bioterrorism response plans in the future.

**Keywords:** anthrax; bioterrorism; civil-military cooperation; USAMRIID

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## Chemical/Biological Threat

### Co-operation in the European Union on Preparedness and Response to Biological and Chemical Agent Attacks (Health Security)

*Germaine Thinus*

Health Security, Task Force European Commission

The actions of the European Union (EU) relative to terrorism has been outlined in three communications issued by the European Commission: (1) November 2001, (2) June 2002, and (3) June 2003, that deal in detail with the health aspects of this action, (communication COM (2003) 320 final). Moreover, a joint programme of action for chemical, biological, and radio-nuclear threats was agreed by the EU Council of Ministers and the Commission on 20 December 2002, as requested by the European Council (heads of State and Government of the EU) in Ghent, Belgium in October 2001. This programme sets out the key objectives of action on CBRN threats across the policies and sectors of activities of the EU, and lists the legal instruments that can be used to counter such threats.

In the area of health, guidelines agreed upon at the Health Council of the EU on 15 November 2001, led to the drawing-up of the 25-action programme on health security, currently being implemented in close collaboration between the Commission and the EU Member States, which aims to contribute towards:

1. EU-wide capability for the timely detection and for the identification of biological and chemical agents in laboratories;
2. Rapid and reliable determination and diagnosis of human disease cases;
3. Availability of medicines;

4. Co-ordination of emergency plans and responses, and availability of predictive models for disease propagation and the impact of counter-measures;
5. Dissemination of rules and guidance on facing-up to such attacks.

Results obtained so far include:

1. A co-ordination mechanism has been established. It comprises the Health Security Committee of high-level representatives of the EU Member States charged with raising the alert, consulting rapidly after incidents, and in the event of crises, exchanging information and co-operating on preparedness and response measures, and a 24 hour/7 day-a-week, rapid alert system (RAS-BICHAT), operational since June 2002, which links the members of the Health Security Committee and also permanent contact points in all of the Member States;
2. Lists of biological terrorism agents have been reviewed, and a matrix with all of the agents has been developed for prioritising public health actions. Case definitions for smallpox, anthrax, tularemia and Q-fever have been worked-out for surveillance purposes, and a Commission decision that renders them mandatory is to be adopted in due course;
3. A platform of cooperation between public health laboratories in all Member States has been set-up, and a network has been formed consisting of high-level safety laboratories in the Member States to ensure that bioagents are detected rapidly wherever they are released. Moreover, a ring test and a quality assurance project are being launched;
4. Clinical guidelines have been prepared and agreed upon by the Health Security Committee for publication and dissemination. These guidelines cover anthrax, smallpox, botulism, plague, tularemia, haemorrhagic fever viruses, brucella, Q-fever, encephalitis-producing viruses, glanders, and melioidosis;
5. Chemical terrorism agents have been compiled in a matrix from lists of toxic chemicals, and work is being undertaken to study generic scenarios, identify training needs and course content, and to create a platform for alert and response to deliberate chemical events by linking existing systems. A guidance document for the use of antidotes to agents of chemical terrorism has just been produced by the European Medicines Evaluation Agency (EMEA);
6. Sharing of information on smallpox emergency plans has been organized, and a table has been developed for comparison of corresponding measures and alert levels. Tests of communication channels and an evaluation of existing emergency plans will be conducted in the form of exercises for smallpox in the context of the G7 group of countries, Mexico, and the Commission later this year. A similar EU-level exercise for biological and chemical agents release events is being prepared and scheduled to be conducted next year;
7. Consensus on the modeling of outbreaks and on the data for simulations has been achieved, and work is being pursued on the establishment of a relevant database and on the development of generic models that subsequently can be adapted to include specific conditions in Member

States;

8. A directory of experts that could be made available for advice or for missions to assist in the management of health emergencies, especially epidemics, is being drawn-up together with arrangements for such missions.

The initiative launched in November 2001, to address the issue of the availability and stockpiling of medicines for mounting an effective response to bioterrorist attacks yielded guidelines, issued by the EMEA, on the use of medicines against potential pathogens and guidance on the development of *vaccinia* virus-based vaccines against smallpox. An amendment to the pharmaceutical legislation on liability for non-authorized products for bioterror-related purposes currently is being discussed at the European Parliament and the Council. The option of EU level stockpiles was not pursued due to Member States' preference for possessing their own stockpiles. In the area of research, key priority topics have been identified to be supported under the Sixth Framework Programme for Research with the aim to contributing to improved health surveillance and prevention in the EU. On the international scene, under the Global Health Security Action initiative agreed by the G7 and Mexican Health Ministers and Commissioner Byrne in Ottawa on 07 November 2001, cooperation has been promoted on smallpox emergency plans and training, laboratory detection techniques, risk management and communication, chemical incident preparedness, and patient isolation techniques. The World Health Organisation is fully associated in these activities. A bioterrorist incident scale for risk communications to the initiative has been agreed upon between the parties, a smallpox training-the-trainers' workshop has been held, groups on laboratory collaboration, risk management, chemical events, and influenza have been formed, and a smallpox plan evaluation exercise is planned for later this year.

The accession countries have been kept informed of the activities on health security and currently are being integrated into the structures that have been set-up to deal with health security issues.

**Keywords:** agents, chemical and biological; anthrax; attacks; contacts; detection; European Union (EU); guidelines; isolation; matrix; preparedness; public health; Q-fever; response; risk management; security, health; smallpox; terrorism; tularemia; *Prehosp Disast Med* 2003;18(s1)s16.

### International Response to Disease Epidemics — Lessons From SARS

*Dr. Randall N. Hyer, Medical Officer*

Global Alert and Response, Department of Communicable Disease Surveillance and Response, World Health Organization, Geneva, Switzerland

Outbreaks of disease can strike anywhere. These outbreaks can be new diseases, old diseases that may strike again, or the deliberate release of an infectious agent. The world has just witnessed the outbreak of the severe acute respiratory syndrome, or SARS, from November 2002–July 2003. Responding to large outbreaks of infectious disease takes international coordination and collaboration. Early detection of disease called rapid response, provides the maximum potential to prevent cases and save money and lives. SARS is an atypical pneumonia with a rapid clinical course