

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;
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International Response to Disease Epidemics — Lessons From SARS

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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

and severe outcomes. SARS is a new disease, and there are many features of SARS that might be similar to an outbreak caused by an unknown biological warfare agent, to include initial symptoms being non-specific and common, high attack rates, respiratory transmission, little or no understanding of the etiology and origin of the disease, and high public fear and anxiety. The World Health Organization, through the Global Outbreak Alert and Response Network, led the international response to SARS.

SARS has taught many lessons for detecting and responding to such an outbreak. These lessons include the importance of preparedness, global surveillance, global leadership, a scientific basis to control measures, transparency, surge capacity, international collaboration, and communications. These lessons can be applied to assess and improve global capacity to respond to other infectious disease threats most notably the next influenza pandemic and the possible deliberate use of a biological agent.

Keywords: collaboration; communication; infectious diseases; leadership; pneumonia; preparedness; response, international; severe, acute-onset, respiratory syndrome (SARS); surveillance; surge capacity; transparency

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Role of the OPCW in Response to Chemical Accidents

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Concept of Assistance

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In accordance with Article X of the Chemical Weapons Convention (CWC), the Organisation for the Prohibition of Chemical Weapons (OPCW) (www.opcw.org) carries out the following implementation measures of assistance.

1. The coordination and delivery to States Parties for protection against Chemical Weapons (CW) including: (a) Detection equipment; (b) Alarm systems; (c) Protection equipment; (d) Decontamination equipment; (e) Decontaminants; (f) Medical antidotes; (g) Treatments; and (h) Advice on any of these protective measures.
2. The OPCW is able to provide States Parties with information on protective measures against CW, providing expert advice for capacity building, establishing a voluntary fund for assistance, and the conclusion of bilateral agreements between States Parties for offers of assistance.
3. The OPCW has adopted a programme for the establishment of permanent stockpiles of protective equipment including inspection and serviceability. Associated with the use of such stockpiles is a programme of assistance in developing emergency plans, legislation, training programmes, procedures, and standards.
4. In the case of an alleged use of CW, the requesting State Party may request the OPCW to conduct an investigation to collect facts to determine whether CW has been used.

This presentation will provide further insight into the role that OPCW has in the provision of assistance to States Parties under Article X of the CWC.

Keywords: advice; assistance; chemical weapons; Chemical Weapons Convention (CWC); equipment; funding; Organisation for the Prohibition of Chemical Weapons (OPCW); protection; stockpiles

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Preventing the Militarization of Biology: Biological Warfare Past, Present, and Potential Future

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There is increasing concern relative to the possible use of biological weapons of mass destruction. This current concern is set in the context of the history of offensive biological weapons programs over the last 100 years. It is argued that while the present threat is limited, it could escalate substantially over the next decades. All previous scientific and technological solutions have been applied in major ways to military purposes, and this looks as if it also will happen to the ongoing revolution in the life sciences.

The potential outcomes of significant militarization of biology are detailed in two key areas: (1) microbiology and (2) neuroscience. It is argued that the potential outcomes are in nobody's interest, and that all possible means should be undertaken to prevent militarization of biology.

Keywords: microbiology; military; neurosciences; outcomes; revolution of life sciences; weapons, biological; weapons of mass destruction

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Disaster Medicine

Hospital Disaster and Emergency Planning

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For the past decade, at least one disaster has occurred somewhere every day, affecting hospitals throughout the world.¹ With increasing population growth and maldistribution, increasing urbanization, increasing environmental degradation, and continuing economic imbalance, the impact of disasters or emergencies on hospitals is likely to increase. Hospitals play a critical role in the local response system to emergencies, providing: (1) initial triage, decontamination, and emergency medical care for victims able to flee the disaster scene; (2) definitive medical care for the vast majority of victims; and (3) continued medical care to the community with ongoing medical problems.

This presentation considers the process and structure of effective hospital emergency planning. Hospital emergency planning optimally incorporates processes that are multidisciplinary, evidence-based, relevant to the community at risk, and cost-effective. Components of the hospital disaster plan include the plan definition including risk assessment, coordination and control system, plan activation, medical operations, logistical operations, planning operations