



WORLD HEALTH ORGANIZATION

EXECUTIVE BOARD
116th Session
Provisional agenda item 7.1

EB116/9
4 May 2005

Implementation of resolution WHA55.16 on global public health response to natural occurrence, accidental release or deliberate use of biological and chemical agents or radionuclear material that affect health

Report by the Secretariat

1. Resolution WHA55.16 addressed the need to strengthen public health capacity to respond to events caused by the natural occurrence, accidental release or deliberate use of biological and chemical agents or radionuclear material. It underlined WHO's focus on the possible public health consequences of such events, and recognized that strengthening surveillance of and response to naturally or accidentally occurring diseases is one of the most effective ways to prepare for deliberately caused events.
2. WHO's basic activity in this area has been to strengthen national and global capabilities to detect and contain emerging and epidemic-prone diseases. Routine alert and response systems for these diseases enhance the ability to detect and investigate deliberately caused events, as the initial epidemiological and laboratory techniques are similar. Adequate knowledge of the epidemiology of infectious diseases facilitates recognition of an unusual event. Strengthened systems for outbreak alert and response thus serve a dual purpose: they improve capacity to mitigate the real risk of the spread of emerging and epidemic-prone diseases while strengthening national and global defences against deliberately caused events.
3. Resolution WHA55.16 urged Member States to treat any deliberate use of biological and chemical agents or radionuclear material as a threat to global public health and to share expertise, supplies and resources in order rapidly to contain the event and mitigate its effects. In recent years, WHO has gained considerable experience in coordinating large international responses to outbreaks of emerging and epidemic-prone diseases that may represent a global threat. Between 1 May 2002 and 31 March 2005, 760 outbreaks of potential international concern were detected and verified in collaboration with 138 affected countries. International assistance was requested for more than 70 of these events. For more than 50, international teams were deployed to provide field support with expertise from WHO and its Global Outbreak Alert and Response Network.
4. This experience has enabled the mechanisms for sharing expertise, supplies and resources among Member States to be refined. Operational activities involve a rapid outbreak alert, public health investigation, and epidemiological verification; dispatch of field teams and logistic supplies (including

vaccines, drugs and personal protective equipment); continuous communication with Member States and the general public; and provision of technical support through a network of specialized laboratories, including those equipped to work with highly hazardous pathogens. Activities are now coordinated with state-of-the-art communication technologies in the Strategic Health Information Centre at WHO headquarters, inaugurated in 2004.

5. Mechanisms for alert and response were most extensively engaged and tested during the outbreak of severe acute respiratory syndrome in 2003, when the sharing of expertise, supplies and resources proved decisive for rapidly containing the epidemic. More recently, concern about the threat of an influenza pandemic has led to preparedness plans being drawn up, both nationally and internationally, for increasing the capacity of health-care facilities to cope with a surge in demand, rapidly augmenting supplies of vaccines and drugs, and managing the logistics of mass intervention in emergency conditions. Such activities contribute further experience to the overall expertise in public health preparedness, as similar needs are expected to arise during a deliberately caused event.

6. The response to events involving the suspected deliberate use of biological or chemical agents or radionuclear material requires close collaboration between various non-traditional partners. As communication and coordination mechanisms need to be established and tested well in advance of an event, WHO has begun informal exchange with relevant organizations and initiatives, such as the G7 and Mexico Global Health Security Action Group, the Health Security Committee of the European Commission, the North Atlantic Treaty Organisation, Interpol, the United Nations Interregional Crime and Justice Research Institute, and the Secretariat of the Convention on the Prohibition of the Development, Production and Stockpiling of Bacterial (Biological) and Toxin Weapons and on their Destruction (1972).

7. WHO technical guidelines for assessing national programmes on preparedness for and response to the deliberate release of biological or chemical agents and radionuclear material are being developed in collaboration with the Organisation for the Prohibition of Chemical Weapons and IAEA. The guidelines, which adopt an all-hazard approach to risk management, provide a framework for assessment by Member States of their capacity to manage the consequences of emergencies due to natural occurrence, accidental release or deliberate use of agents or materials; they have been field tested in Canada, Jordan, the Philippines, and Thailand. In 2004, WHO provided technical support for public health preparedness for natural and deliberate epidemics to the Government of Greece for the Athens 2004 Olympic and Paralympic Games.

BIOLOGICAL EVENTS

8. In recent years, Member States have expressed particular concern that smallpox might be reintroduced, through either a laboratory accident or a deliberate act of bioterrorism. A global reserve of smallpox vaccine is being established as a logical and immediate way to enhance global preparedness. One component of that reserve is a vaccine stock, managed by WHO, for emergency use after confirmation of a case of smallpox.

9. Networks of experts and laboratories, standard procedures, training and quality assurance are being developed and strengthened for dangerous pathogens such as the causative agents of anthrax, brucellosis and tularaemia. To guard against the accidental release of hazardous pathogens, WHO published the third edition of its *Laboratory biosafety manual* in 2004. Guidance on laboratory biosecurity, currently in draft, offers a strategy for the management of biological risks in laboratory

environments; this document is being prepared in collaboration with FAO, OIE, and the International Centre for Genetic Engineering and Biotechnology.

CHEMICAL EVENTS

10. Surveillance of diseases of possible chemical etiology is a daily element in WHO's outbreak alert and response activities. The system works well to detect disease outbreaks due to chemical agents, which often present as a cluster of cases with unusual symptoms, and to provide, in collaboration with the relevant departments within WHO, rapid investigation, verification and intervention, when requested.

11. The International Programme on Chemical Safety of ILO, UNEP and WHO has undertaken additional activities to strengthen the public health response to chemical events. A Global Chemical Incident Alert and Response System has been established for early detection, verification, assessment and rapid response to disease outbreaks of chemical etiology. Regional meetings have been organized to strengthen the global network of poison centres and thus facilitate emergency responses to chemical incidents.

12. Guidance and training materials to strengthen preparedness for chemical incidents and emergencies have been developed in collaboration with OECD, the Inter-Organization Programme for the Sound Management of Chemicals, and relevant organizations in the United Nations system.

RADIONUCLEAR EVENTS

13. In the event of radiation emergencies, the role of WHO within the United Nations family is to secure public health. WHO established the Radiation Emergency Medical Preparedness and Assistance Network to promote preparedness for radiation emergencies and to advise health authorities in the event of overexposure of people to any source of radiation. The Network's centres provide emergency medical assistance after radiation accidents and conduct technical training as a preparedness measure.

14. Under the Convention on Early Notification of a Nuclear Accident, IAEA is the designated international organization for official notification of accidents or events involving radionuclear material. When international assistance is requested, WHO helps to establish a link between the affected country and the Network, and keeps all the latter's centres informed about the event and progress in its management.

15. Through the Network, WHO works to strengthen the response capabilities of international and national bodies during radionuclear emergencies. WHO also formulates standards for food and water consumption immediately after radiation accidents.

FOOD SAFETY

16. WHO has been providing advice to Member States on the prevention of deliberate contamination of food, emphasizing the strengthening of the existing food safety infrastructure. With regard to international preparedness, WHO has established the International Food Safety Authorities Network, including emergency contact points, within which an emergency network, known as

INFOSAN EMERGENCY, will be activated when a food safety emergency situation is considered to pose an imminent risk of severe harm to consumers. Such situations may involve natural, accidental or deliberate contamination of food with hazardous biological, chemical, radiological or physical materials.

PREPAREDNESS AND RESPONSE TO OTHER HEALTH CRISES

17. WHO has supported health ministries in assessing health impacts of natural and man-made disasters through the coordinated delivery of technical expertise to disaster-affected populations. Through disaster-preparedness programmes, WHO has contributed to better preparedness of the health ministries and local health authorities in disaster-prone areas. A three-year plan is being implemented for performance enhancement for disaster prevention and management in disaster-affected and disaster-prone countries, with a focus on those in Africa. Several technical guidelines for health aspects of various emergencies have been prepared and disseminated by WHO.

ACTION BY THE EXECUTIVE BOARD

18. The Board is invited to note the report.

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