Workshop on development of a strategy for strengthening national health preparedness for and response to deliberate use of biological and chemical agents or radionuclear materials that affect health

Geneva, Switzerland
20–22 June 2005
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1. Introduction

In World Health Assembly resolution WHA55.16 of 18 May 2002 (1), WHO’s Member States requested the Director-General to strengthen activities on health preparedness for and response to the deliberate use of biological and chemical agents or radionuclear materials that affect health. Resolution WHA55.16 is being implemented within various technical programmes, both at headquarters and at regional offices, including the Programme on Chemical Safety, the Department of Communicable Disease Surveillance and Response, the Department of Food Safety, Zoonoses and Foodborne Diseases, Health Action in Crises, the Department of Mental Health and Substance Abuse, Radiation and Environmental Health and Water Sanitation and Health.

Resolution WHA55.16 identifies four priorities for action by the Director-General:

1. to strengthen global preparedness and response;
2. to provide tools and assistance to Member States, particularly developing countries, for strengthening the preparedness of national health systems;
3. to issue international guidance and technical information;
4. to evaluate new tools.

The resolution states that one of the most effective means of preparing for deliberately caused disease is strengthening public health preparedness for and response to natural and man-made health emergencies. A comprehensive report on the activities of the secretariat in response to WHA55.16 was submitted by the Director-General to the Executive Board in May 2005 (2).

Other WHO policy directives, such as the International Health Regulations (2005) (3) and Global health security: epidemic alert and response (4), call for a systemic approach to global health security and reiterate that preparedness for deliberately caused disease can be markedly improved by strengthening public health. All relevant WHO activities in support to Member States should therefore adopt this strategic approach.

In 2004, WHO published the second edition of “Public health response to biological and chemical weapons: WHO guidance” (5). The guidance includes strengthening of public health within existing policies for emergency preparedness and response to natural and man-made emergencies, including outbreaks of infectious diseases and industrial chemical accidents. To support Member States in implementing this policy, an operational guide entitled “National capacity to manage health risks of deliberate use of biological and chemical agents and radionuclear materials: WHO guidance” (referred to below as the Guidance document) was drafted. The document was tested in four countries (Canada, Jordan, the Philippines and Thailand) in four WHO regions.
2. The workshop

Dr A. Asamoah-Baah, Assistant Director-General, Communicable Diseases, welcomed the participants (Annex 1) on behalf of the Director-General, and introduced the subject (Dr Asamoah-Baah's introductory remarks are summarized in section 4.1). Dr Roque Monteleone-Neto was nominated as Chair for day 1, Dr Eric Noji as Chair for day 2 and Dr Carmencita Banatin as Chair for day 3. Dr Michael Hills was nominated as Rapporteur. The participants adopted the proposed agenda.

The objective of the workshop was to formulate a strategic direction for WHO and to identify tools to assist Member States in strengthening their preparedness for and response to the health consequences of the deliberate use of biological and chemical agents or radionuclear materials. The workshop was organized into four sessions:

- national and international public health issues and implications for preparedness and response;
- national capacity needs (and development options) for strengthening national health preparedness and response;
- WHO support to Member States on health preparedness and response;
- strategic directions for WHO and related tools.

The workshop comprised presentations, group work and plenary sessions. Several presentations and reports were given on the activities of regional offices and headquarters on national health preparedness for and response to biological, chemical or radionuclear risks, which were followed by questions. This report, the presentations and the background information distributed at the workshop are accessible on the World Wide Web (6). This report summarizes the discussions and recommendations of the workshop for use by WHO and other international organizations, Member States and donors, to guide their support to countries.

3. Recommendations

The workshop drew up generic and specific recommendations for WHO and related tools. Specific recommendations were made in the areas of advocacy, training, guidance and information.

3.1 Generic recommendations

3.1.1 Defining a strategy

WHO needs an overall strategy for implementing WHA55.16 to assist Member States in managing the health risks from deliberate use of biological and chemical agents or radionuclear materials, taking into account the requirement of the International Health Regulations (2005). Better coordination and collaboration are needed among WHO programmes, and information should be exchanged with other relevant sectors and organizations. Examples of clear strategic
directions and definition of roles are provided by the international coordination arrangements for preparing for and responding to nuclear or radiological emergencies (7) and WHO internal guidance for radiation emergency responses (8).

3.1.2 Covering all hazards

Health is a good basis for discussions on national preparedness for the possible deliberate use of biological and chemical agents or radionuclear materials at country level. The most effective approach is to strengthen public health preparedness for and response activities to natural or accidental events that affect health. If deliberate use of biological and chemical agents or radionuclear materials is considered at the same time as natural and accidental events, the relevant stakeholders can exchange information and thus address possible deficits in the capacity to manage all types of risks to public health.

3.1.3 Managing the risks

The outcomes of a country-specific security threat assessment should provide the basis for the risk assessment process, with health playing a key role in assessing and managing these risks. WHO cannot be involved in the internal security matters of Member States: its role is limited to acknowledging if these processes have been implemented and shared with the health sector.

3.1.4 Interfacing with security

Relations and possible cooperation with other international organizations, such as Interpol, the Organisation for the Prohibition of Chemical Weapons, other United Nations bodies (e.g. the Security Council resolution 1540 (9), the Interregional Crime and Justice Research Institute), should be explored during development of an overall strategy for implementation of WHA55.16. Consideration should be given to the fact that WHO cannot depart from its public health mandate and its obligations under the International Health Regulations (2005).

3.1.5 Engaging the private sector

Interactions exist between the private sector and numerous WHO programmes (e.g. food safety through the Codex Alimentarius). The International Health Regulations (2005) provide an opportunity for WHO to examine ways to engage the private sector and to assist Member States to do likewise (e.g. the airline industry and International Civil Aviation Organization) on this issue.

3.2 Specific recommendations

3.2.1 Advocacy, communication and collaboration

WHA55.16 gives the Organization a clear mandate and supports the role of WHO and the public health sector in issues related to natural, accidental or deliberate use of biological and chemical agents or radionuclear materials. WHO should define and communicate its political and technical role in managing such risks, emphasizing the interface between security and public health and coordination within the Organization. Implementation of the International Health Regulations (2005) will facilitate this process.
WHO should use its leadership role to encourage ministries of health to strengthen collaboration and communication with security agencies at national level (law enforcement, military, intelligence), at high-level meetings and at regional meetings or workshops. WHO should also provide material for advocating intersectoral collaboration and communication at all levels of government.

Effective communication and collaboration with the media are crucial for the management of biological, chemical or radionuclear risks. Information should be provided to ministries of health to help them design effective risk communication programmes and to inform the media about the possible health implications of the risks.

Collaboration and coordination are also needed with other sectors, including customs, agriculture and veterinary services and industry, to respond effectively to the risks posed by deliberate use of biological and chemical agents or radionuclear materials. WHO should encourage Member States to establish or strengthen such collaboration and provide models for practical arrangements.

WHO should help countries to set up or identify international collaborating centres for preparedness for deliberate use of biological and chemical agents or radionuclear materials, and establish links to security sectors through, for example, the United Nations Interregional Crime and Justice Research Institute or Interpol.

### 3.2.2 Training

Training is a key element in capacity building; however, to be effective, it must be tailored to needs. Training needs should be analysed at national and regional levels, and the Guidance document provides assistance in attaining this objective. In the identification of training needs, the following phases might be addressed:

- before an event: prevention and preparedness;
- during an event: response, scene management, concurrent public health and law enforcement investigations, consequence management, risk communication;
- after an event: mitigation and recovery; and lessons learnt.

Analysis of training needs involves creation of a database on existing training and a directory of training centres; identification of gaps in training needs at national and, if possible, regional level; identification of technical partners and donors, and identification of opportunities for joint training with other organizations such as the United Nations University, the Asian Disaster Preparedness Centre, the Organisation for the Prohibition of Chemical Weapons, the International Atomic Energy Agency and Interpol.

To help countries to strengthen health preparedness, WHO should draw up case studies, simulations/exercises or scenarios based on real examples and scientifically sound assumptions on the deliberate use of biological or chemical agents or radionuclear materials. These should be designed in collaboration with other agencies (e.g. Interpol) and adapted to each country and region.

### 3.2.3 Guidance document

The Guidance document was drafted in response to the request in WHA55.16 to help Member States develop a strategy for building capacity. It provides assistance for evaluating current capacity, identifying any gaps and designing strategies for addressing those gaps and
determining priorities. The Guidance document addresses health preparedness for and response to the deliberate use of biological and chemical agents or radionuclear materials as part of a broader all-hazard approach for managing risks to health.

The Guidance document should not be considered an end in itself. WHO should define the contexts in which the document should be used and its relation to other activities and products (e.g. advocacy, training). It is also important to ensure that the guidance provided is consistent with regional and country office approaches and that ownership of the process of implementation is shared. The implementation must be tailored to regional and country needs and resources, e.g. at regional seminars or by training in assessment.

WHO should collaborate with other organizations, e.g. the European Commission, to increase knowledge about capacity, capacity assessment and indicators of capacity assessment. Member States should be encouraged to share and compare their approaches and results, for their mutual benefit and to help WHO to improve the Guidance document. The document should support implementation of the International Health Regulations (2005), as it includes a model for assessment of needs. A shorter, more practical document is required by Member States and regional offices, which contains a separate section on implementation. The Guidance document is only one of a set of tools that will be needed.

3.2.4 Information

Specific capabilities and technical resources (e.g. sampling, analysis, protocols and standards) are required for the identification of biological and chemical agents or radionuclear materials. Therefore, national and regional networks that have such capabilities and resources should be identified and the information made available to Member States on request.

Member States should have ready access to information on WHO activities on deliberate use of biological or chemical agents or radionuclear materials, through the World Wide Web and CD-ROMs. This information should be evaluated to identify ‘best practices’ and categorized according to the needs of different users, e.g. professionals, policy-makers, the media and the public. The relevant documents and materials, or at least their summaries, should be translated into languages other than English (i.e. the six official WHO languages).

4. Highlights of workshop sessions

4.1 Introductory remarks by Dr Asamo-Baah

WHO is active in this area in response to a request made to the Director-General by all 192 Member States in 2002, through World Health Assembly resolution WHA55.16. Member States have specific political stances concerning WHO’s work on the deliberate use of biological and chemical agents or radionuclear materials and in particular on issues related to biological agents. During negotiation of the International Health Regulations, successfully concluded in May 2005, inclusion of the word ‘deliberate’ led to protracted, difficult negotiations. WHO has no wish, and would not like to be perceived as wishing, to address national security matters, which are outside its mandate and the sole responsibility of its Member States.

Although WHO cannot address this subject, it is bound to provide support to its Member States in addressing these new risks to public health. WHO has clearly demonstrated its ability to find
new solutions to new and old risks to public health, as, for instance, in its Alert and Response Operations within the Global Outbreak Alert and Response Network during the outbreak of SARS and the WHO-wide response to the tsunami in several Asian countries in December 2004.

To address the new challenges posed by deliberate use of biological and chemical agents or radionuclear materials, ministries of health must work closely with new partners, such as law enforcement, intelligence and military organizations, who have an important role in responding to such challenges. Such partnerships should be established well in advance of an emergency and are essential to effective responses to these health risks.

4.2 Public health implications specific to deliberate use of biological and chemical agents or radionuclear materials

4.2.1 Differences between deliberate, accidental and natural events

The key factors identified in working groups and plenary discussions that differentiate deliberate from accidental or natural events are summarized below. Use or threatened use of biological and chemical agents or radionuclear materials, while infrequent, could have a wide range of possible outcomes in terms of mortality and morbidity, from relative insignificance to mass disruption of life or mass casualties. In most cases, however, widespread panic and fear should be expected, along with disruption of travel and trade and other vital services. These possible outcomes cannot, however, justify separate public health measures, except when they are essential for effective coordination or technical needs above and beyond what is needed for natural or accidental events. Unexpected and unknown factors must be envisaged for deliberately caused events, although they should be evaluated scientifically.

4.2.2 Organizational differences

The greatest difference for the management of health interventions is the type of involvement of non-health sectors before, during and after deliberate use of biological and chemical agents or radionuclear materials. These sectors can include security organizations such as intelligence, military and law enforcement. While the health response to the public health problem remains largely the same, the management of the event differs because of the security context in which the health sector operates, raising the following issues:

- Clear definition is needed of who is in charge and the roles of each stakeholder (chain of command).
- While security is generally a national responsibility, public health may be the responsibility of state or local authorities and agencies other than the national ministry of health.
- An event perceived as a public health emergency might subsequently be found to be a deliberate act, requiring a change in control. The arrangements for a shift of control from health to security services must be set up beforehand.
- Maintenance of public health actions might be affected by national sovereignty issues, which can affect coordination and collaboration, both nationally and internationally, between public health and security bodies, and could impede normal public health actions.
If a number of different departments and agencies are responsible, the role of each agency must be clearly defined and information shared.

Risks are managed differently by various nations because of different perceptions and priorities, which can lead to a discordant, fragmented approach.

Information and communication before an event determine the preparedness of a sector, control of the information and the information available.

The criminal investigation component should determine whether an act is deliberate; the crime scene might change information flow.

Cross-border public health and security responsibilities must be determined.

Vaccines, drugs, other therapeutic agents and resources must be distributed and shared in countries that have significant resource constraints.

Samples might have to be transported across international borders, as not all Member States have the necessary laboratory capacity.

The vocabulary and procedures of the security and public health sectors must be harmonized; for instance, the words ‘risk assessment’ and ‘threat assessment’ are used differently in these two sectors.

There must be timely exchange of information between health and security organizations, including security threat assessment, so that the health sector can determine how best to manage the health risks.

National leadership and security agencies may obtain health information from sources other than public health authorities, such as from military sources, leading to possible gaps in their understanding of actual public health capacity and capability.

### 4.2.3 Differences in communications

The role and nature of communications differ when they are required for the public, within a government and between governments. Specific issues include:

- the kind of information to be communicated and who controls communication;
- the information to be released to the public health, law enforcement and political sectors and between governments;
- controlled involvement of the media;
- raising public awareness;
- raising the awareness of all potential partners;
- the public perception of risk and risk communication, which depends on who is addressing the public, with politically tailored media strategies and communication;
- information before and after the event and the respective roles of the media; and
- psycho-social factors and the role of fear and terror, which might require triage and overwhelm the capacity of the health infrastructure.
4.2.4 Technical differences

Relatively few technical aspects can be considered to be different. These include:

- awareness of unusual signs, symptoms and epidemiology for medical personnel;
- the need for flexible, but scientifically sound, scenarios;
- enhanced importance of environmental sampling, including the chain of custody;
- identification of similarities, differences and overlaps between forensic (law enforcement) and field epidemiology (health, veterinary) investigations;
- possibility of secondary attacks;
- emphasis on protection of responders;
- management of the environmental impact (e.g. decontamination), psychological and public perceptions and other long-term effects; and
- constrained public health response capacity, which might require effective networking at national, regional and international levels for infrastructure, personnel, laboratories, training of first responders, financial resources and integration of public and private sectors.

4.3 National capacity

Four country programmes were presented (available on the World Wide Web), from Canada, Jordan, the Philippines and Thailand, to illustrate different approaches to the management of biological, chemical and radionuclear events and to provide background information for subsequent group work and plenary discussions.

Canada’s experience illustrates the importance of finding commonalities between existing programmes and enhancing multi-sectoral relations. Institutionalization of methods of preparedness and networking has moved from reliance on individuals to building knowledge and mutual understanding of each other’s roles. Challenges remain with respect to the responsibilities shared by national (security) and provincial or territorial bodies (public health services) and in ensuring ‘surge capacity’ for infrequent events.

In the Philippines, natural disasters and civil disruption remain major challenges. Gaps have been identified in existing programmes of the Ministry of Health and in particular the difficulties of ‘silos’. In comparison with these existent issues, deliberate biological, chemical or radionuclear threats have yet to engage senior leadership fully. Furthermore, migration has resulted in a high turnover of staff knowledgeable in emergency management. Responses to communicable and emerging diseases and natural disasters still require work, although improvement of the responses that exist will benefit the response to deliberate disease. Training and networking are needed.

Thailand provided examples of natural infectious diseases outbreak (biological) and chemical accidental events that have occurred during the past four years. Significant progress has been made in forming institutional networks, structures and policy for bioterrorism, on the basis of communicable disease response capability raised in the wake of SARS and avian influenza. It has been recognized that biological and chemical preparedness is a multi-dimension, multi-sector task that depends on the strength of public health infrastructures, especially for
surveillance, laboratory verification, case management, risk communication and transparency of information shared between each multi-sector task.

In South Africa, the anthrax event in 2001 exposed the lack of internal coordination, leading to greater cooperation between the security and health sectors. As a consequence an action plan was drawn up, which was endorsed by an interdepartmental committee. Preparedness activities have since become more institutionalized, with joint procedures and a manual. South Africa is now looking for ways to support neighbouring countries.
References


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Annex 2 – List of presentations

– WHO: Workshop on development of a strategy for strengthening national health preparedness and response to the deliberate use of biological or chemical agents or radionuclear materials that affect health (Dr Ottorino Cosivi)

– WHO: Field testing of the draft ‘Guidelines to assess national preparedness and response programmes to deliberate use of biological or chemical agents or radionuclear materials: process analysis and lessons’ (Dr Maurizio Barbeschi)

– WHO: Role of the WHO Radiation and Environmental Health Programme in radiation emergency preparedness and response (Dr Zhanat Carr)

– WHO Regional Office for the Eastern Mediterranean: Challenges and opportunities to strengthen national emergency preparedness and response: a regional perspective (Dr Altaf Musani)

– Canada: Challenges, opportunities and needs for strengthening national health preparedness to deliberate biological, chemical or radionuclear threats (Dr Frank Welsh)

– Philippines: Challenges, opportunities and needs for strengthening national health preparedness and response to biological or chemical agents or radionuclear materials (Dr Carmencita Banatin)

– South Africa: Challenges, opportunities and needs of South Africa for strengthening national health preparedness and response to biological, chemical or radionuclear threats (Dr Ben Steyn)

– Thailand: Challenges, opportunities and needs of Thailand for strengthening national health preparedness to biological, chemical or radionuclear threats (Ms Pahurat Kongmuang)
Annex 3 – List of background documents distributed at the workshop


Annex 4 – Appraisal

On the final day of the workshop, the remaining participants were asked to complete a questionnaire designed to elicit their impressions on a variety of aspects of the meeting. Eighteen appraisal sheets were completed by the 25 remaining participants. Comments were made on the most useful aspects; the least useful aspects; the method used; possible improvements, and any additional issues.

The element of the workshop that was most appreciated was the frankness and openness of the discussions. The next most useful aspects were considered to be the networking that occurred among participants and clarification of the role of WHO in managing biological, chemical or radionuclear risks. The small group discussions preceding plenary sessions were also considered to have been useful.

The least useful aspect of the workshop was felt to be the fact that developing countries were not sufficiently represented. Another criticism was that the discussion focused too heavily on broad issues without touching on specific problems.

The main comments on the method used were the success of the effort to create a participatory forum for discussion and the well-planned group work.

Suggested improvements were to define an overall strategy for the workshop, with clearly stated goals, to provide better guidance to participants. Another suggestion was for better background information before the workshop. It was recommended that chairpersons be appointed and briefed before the start of small group discussions in order to increase efficiency. Several participants mentioned that group work could be improved or increased.

In another set of questions, participants were asked to score the workshop in terms of its overall usefulness; its relevance to national capacity development needs; the information provided before the workshop, and the information provided at the workshop. All items were scored as ‘useful’ or ‘very useful’.

Finally, the participants were asked whether they considered the duration of the workshop to have been just right, too long or too short. Most responded that its length had been just right.

In the light of the comments made, those aspects of the workshop that were praised will be emulated in coming events, while efforts will be made to improve the functionality, most notably by increasing the diversity of the participating group, conveying a broader strategy and providing better background information.