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International Co-Operation for Disease Surveillance

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Introduction

1. The States Parties to the Biological Weapons Convention (BWC) have agreed, "to discuss, and promote common understanding and effective action on strengthening and broadening national and international institutional efforts and existing mechanisms for the surveillance, detection, diagnosis and combating of infectious diseases affecting humans, animals, and plants". The agreement on this topic has significant implications as a consequence of its direct relevance to Article X of the Convention and due to the fact that agreement on this was reached by the Fifth Review Conference with the objective of enhancing or strengthening the implementation of the BWC. A "common understanding" on these issues between States Parties and an agreement on "effective action" has the potential of making a real contribution to the health-care capacity and welfare of developed and developing States Parties.

2. The WHO, FAO and the OIE maintain, and are developing systems for surveillance and response to disease outbreaks. These should have the support of all States Parties to the BWC. Recent outbreaks of infectious diseases have shown that the outbreak can be contained and suppressed with international support. In this regard, it should be noted that the containment of a disease outbreak at the earliest opportunity and within the smallest geographic area requires the least resources, and international efforts should be directed towards early detection, diagnosis, outbreak identification and response. Such a system will also aid in the rapid detection of unusual outbreaks of disease and enable swift and efficacious responses in cases of alleged use of biological weapons or suspicious outbreaks of disease.

Controlling an Outbreak

3. Effective international response to, and control of, an outbreak will depend on certain key factors:

- a. Disease surveillance, diagnosis and epidemiological investigation.
- b. Data collection, collation and analysis.
- c. Informed decision-making.
- d. Rapid, effective and sustained response.

4. It should however be noted that scientific knowledge and understanding of disease agents and infectious processes are far from complete and continual research is required to keep pace with the natural bio-aggression of micro-organisms.

Existing Disease Surveillance Programmes

5. Many States Parties have effective national disease surveillance systems based on long-standing notification and report-collating mechanisms. These systems allow for speedy and effective responses to detect and contain disease outbreaks.

6. Many States Parties have also recognized the value of international and regional activities to investigate and intervene on an international and regional basis to implement procedures that contain and eliminate the disease.

7. Some States Parties, however, experience challenges in establishing and maintaining effective disease surveillance, analysis and response systems. Assistance to resolve these obstacles will, however, not be sustainable if there is also not a focus on the overall improvement in the health services. Problems that are experienced in establishing and maintaining effective disease surveillance include:

- a. Small overall health budget in real terms and as a proportion of GDP.
- b. Lack of trained medical personnel in rural and impoverished areas.
- c. Lack of regional and rural facilities for disease investigation.
- d. Poor communications and transport services (sample collection).
- e. Lack of capacity for sample analysis and diagnosis.
- f. Lack of basic knowledge concerning unusual and novel pathogens.
- g. Lack of preparedness for detection of and response to disease outbreaks.
- h. Lack of capacity to investigate reports of, and identify, disease outbreaks.
- i. Lack of capacity and procedures to respond to an identified outbreak.
- j. Instability and insecurity can impede surveillance and response.

8. In this context it is important to underline that disease outbreaks do not respect international boundaries and may spread extremely rapidly via modern travel methods. These problems can be ameliorated through international assistance and co-operation as well as at the regional level, where regional groupings of countries could develop regional surveillance programs, possibly laying the foundation for regional response mechanisms.

Expeditious and effective response

9. The containment of a disease outbreak at the earliest opportunity and within the smallest geographic area requires far less resources than will be required at later stages of disease spread. Therefore efforts should be directed towards early detection, diagnosis, outbreak identification and response as well as preparedness, which includes training and allocation of resources.

10. Recent outbreaks of unusual diseases have shown that international co-operation plays an important role in the ability to contain and combat disease outbreaks and that the States involved gain valuable experience and health service capacity as a result of this co-operation.

Unusual/ Suspicious Outbreaks of Disease

11. While the primary motivation for the current focus in the BWC context on the disease surveillance and response issue is based on the Convention's provisions related to biological weapons, it is apparent that most unusual disease outbreaks will occur due to natural evolution resulting in micro-organisms with novel pathogenicities, and to the changing human demographics allowing known infectious agents to develop into epidemic or pandemic threats.

12. Ongoing research efforts should consequently be directed towards disease surveillance and development of epidemiological models for differentiating natural disease outbreaks from those with novel properties, or possible weapons use.

Surveillance of Unusual/Suspicious Outbreaks of Disease

13. An effective surveillance system will assist in the rapid detection of unusual outbreaks of disease and enable swift and efficacious responses by international aid organisations. In addition sufficient data could enable the differentiation between natural outbreaks of disease and the possible deployment of biological agents either as a mechanism of war or of terror.

14. Popular concerns about the use of biological weapons traditionally focus on the use of diseases affecting humans. The potential impact on states and also on economies when diseases are deliberately used against animals and plants, particularly in the agricultural sectors, is also a matter of significant concern as has been demonstrated in recent incidents where natural outbreaks of such diseases have occurred. It has also recently again been demonstrated that such diseases have the capability of spreading to humans.

Proposals

15. States should be encouraged to improve their disease surveillance capabilities. States Parties who are in a position to do so should provide assistance to States Parties that would require such assistance to establish and improve their disease surveillance capabilities.

16. The States Parties, acting nationally and collectively, should actively support the WHO, FAO and OIE in the continued development and implementation of:

- a. Programmes for improving health and epidemiological services in individual countries, with a specific allocation for disease surveillance and reporting activities;
- b. Programmes that are aimed at regional initiatives for the development of, and research into, speedy, effective and reliable disease surveillance and outbreak response activities; and
- c. Programmes that are aimed at international initiatives for the development of, and research into, speedy, effective and reliable disease surveillance and outbreak response activities.

17. The States Parties should nationally and collectively support the WHO, FAO, OIE and relevant regional organisations to establish a standing capacity for epidemiological investigation of disease outbreaks and an immediate response capability.

18. The States Parties should nationally and collectively support the efforts of NGOs in the surveillance of and response to disease outbreaks. States Parties who are in a position to do so should provide assistance to such NGOs to improve their activities where required.
