Meeting on Natural and Intentional Epidemic Risks in the European Region: Strengthening Alert Mechanisms

Report on a WHO Meeting held in collaboration with WHO/CSR Office in Lyon.

Lyon, France
6–8 February 2002
ABSTRACT

Recent events have made it clear that the international community must address the intentional release of biological agents as a public health priority. A recent review of national preparedness plans in the Member States of the WHO European Region has pointed out the need for strengthening national and international capacities for early detection and response to such threats.

The purpose of the meeting was (a) to review the capacity of public health surveillance systems to detect and respond to natural and deliberately caused epidemics; (b) to identify needs and agree on mechanisms for strengthening such capacity; and (c) to identify and agree on how national early warning systems can contribute to regional and global networking initiatives. Representatives of 28 Member States of the Region attended the meeting and agreed on 22 recommendations in the areas of early warning systems, international epidemiology networking, strengthening of national surveillance capacity, laboratory and information technology, and human resources development.

Keywords

COMMUNICABLE DISEASE CONTROL
DISEASE OUTBREAK – prevention and control
DISASTER PLANNING
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Foreword

Naturally occurring communicable diseases are major global sources of illness and death, and strong early warning systems are essential for national, regional and global health security. However, global health security is also challenged by the intentional release of human and animal pathogens. The international community must address these problems as a public health priority.

WHO must focus on the possible public health consequences of such events. Therefore, surveillance systems, the basis for timely disease alert and response mechanisms, must be strengthened at all levels. This is particularly important, as initial infections caused by the deliberate release of a biological agent are most likely to be considered a natural event. Such events pose diagnostic and epidemiological challenges that are similar to those encountered in natural or accidental infections. Surveillance activities must therefore lead to timely and accurate diagnosis. Such information should invoke a cascade of planned control and preventive measures that will best protect the populations at risk.

The WHO Regional Office for Europe, in close coordination with various WHO headquarters programmes, has begun to implement activities for preparedness against the natural, accidental and deliberate release of biological, chemical and radiological agents. These programmes work in close collaboration with a variety of national and international organizations. To harmonize regional plans for enhanced surveillance and preparedness, a consensus meeting was held in Grottaferrata, Italy, in April 2000. Twenty-eight Member States from central and eastern Europe and the former Soviet Union made 36 recommendations for long-term investments in the strengthening of communicable disease surveillance.

A second regional meeting, described in this report, held on 6-8 February 2000 in Lyon, France, was jointly organized by the WHO Regional Office for Europe and the WHO Communicable Disease Surveillance and Response Office in Lyon. The Meeting on “Natural and Intentional Epidemic Risks in Europe: Strengthening Alert Mechanisms” allowed countries that attended the first regional meeting in 2000 to review progress. It also allowed discussions on ways to strengthen national and international capacities for early detection and response to health threats, including those due to deliberate use of biological agents.

I am particularly grateful to the Health Minister of France, Dr Bernard Kouchner, who opened the Lyon meeting, and to the Government of France, the Urban Community of Lyon (COURLY) and the Merieux Foundation for their support. The investments we are now making in the effort to achieve global biosecurity will pay full dividends for our generation and those that follow.

Marc Danzon, M.D.
Regional Director
I. Introduction

Communicable diseases continue to be a major source of illness and death globally, and strong national surveillance and early warning systems are essential for national, regional and global health security.

In 1995, the World Health Assembly adopted WHA48.13 resolution on new, emerging and re-emerging infectious diseases and WHA48.7 resolution on the revision and updating of the International Health Regulations. The World Health Assembly was fully aware that the strengthening of epidemiological and laboratory surveillance and of disease control activities at national level is the main defence against the international spread of communicable diseases. In 2001, the 54th World Health Assembly adopted resolution WHA54.14 “Global Security – epidemic alert and response”. The resolution emphasizes 3 areas of work, mainly revision of the International Health Regulations, including criteria to define what constitutes a health emergency of international concern; development of a global strategy for containment and, where possible, prevention of anti-microbial drug resistance; collaboration between WHO and all potential technical partners in the area of epidemic alert and response, including relevant public sectors, intergovernmental organizations, non-governmental organizations and the private sector.

In the European Region, a consensus meeting was held in Grottaferrata, Italy, in April 2000. Twenty-eight member states from former Soviet Union and Central Europe developed 36 recommendations for long-term investments on strengthening of communicable disease surveillance. This included enhancing surveillance systems, outbreak preparedness, capacity building, creation of networks and international collaboration as well as building partnerships.

The strengthening of country capacities in both epidemiological and laboratory surveillance to improve disease control strategies in terms of effectiveness, timeliness and appropriateness is the principle defence against national and international threats of infectious disease occurrence and spread. Core technical competence for epidemic alert and general communicable disease surveillance need to be developed in order to achieve cost-effective and sustainable disease control programs. The surveillance system should be build into existing systems, be flexible, integrated as far as possible and focused on country and regional priorities. WHO supports capacity building in training in intervention epidemiology, laboratory based surveillance systems, country assessments and development of national plans of action for infectious disease surveillance and response, priority setting, the reform process of legal and organizational epidemiological surveillance systems, as well as training for control of infectious diseases in emergencies.

Recent international events have made it clear that the international community must address the Intentional Release of Biological Agents (IRBA) as a public health priority. The WHO Executive Board retreated in Florence on 13th of November and agreed on critical areas for development of activities such as strengthening of surveillance systems, early warning of health events caused by natural or deliberate use of biological agents, specifically in respect to point 3 of resolution WHA54.14.

In the European Region, there is a need to identify ways to strengthen national and international capacities for early detection and response to health threats that have emerged within the context of deliberate use of biological agents.
II. Objectives of the meeting

1. To review the recent development of public health surveillance systems’ capacity for early detection and response to natural and deliberate occurrence of epidemics
2. To identify the needs and agree on the mechanisms to strengthen public health laboratory and national surveillance systems’ capacity to early detect and respond to epidemic threats
3. To identify and agree on the ways national early warning systems can contribute to regional and global alert and response networking initiatives

III. Developments in National and Regional Surveillance Systems

3.1 Regional and global developments

*Progress report on WHO’s European Region*

The European Regional Office has made progress towards achieving these recommendations over the last two years.

*Surveillance Systems*

Kyrgyzstan, Moldova, Romania have taken steps to adapt and reform their infectious disease surveillance systems, so that more cost-effective prevention and control programmes can be implemented. Follow-up missions to all three countries have been carried out with a view to the development of a national plan of action. These countries are in the process of revising the national guidelines and case definitions based on WHO criteria.

Several courses and workshops have been carried out, notably second-generation surveillance for HIV-AIDS-STI, on the role of laboratories in infectious disease surveillance. The Regional Office of Europe (WHO/EURO) has developed a Computerized Information System for Infectious Diseases (CISID), which is their first database that can be accessed through the Internet both for data entry and data queries.

Collaboration and coordination with WTO, FAO and OIE has improved, notably a joint consultation of WHO-HQ on BSE and with WTO on revision of the international health regulations.

*Epidemic preparedness and response*

WHO/EURO has created an inter-departmental Task Force on Biological, Chemical and Nuclear Warfare to better coordinate and respond to the Member States in case of an emergency as well as improve early warning and preparedness. A questionnaire on preparedness and early warning systems was completed and submitted by 26 Member States. The report of the survey will be edited and distributed to all counterparts.

WHO has cooperated with a number of countries in outbreak response, especially in Kosovo (tularemia), Tajikistan (control of rodents), and an international outbreak of leptospirosis involving cases from several countries, diphtheria outbreak in Latvia, among others.
WHO/EURO has coordinated an informal international consultation on ways to explore partnership and technical guidance for the development of opportunities in applied epidemiology training and increase the pool of international experts from Member States. EPIET has offered 4–6 vacancies to CEE and NIS Member States to participate in the yearly three-week English course on applied epidemiology in Veyrier du Lac in France. In 2001, four fellowships from Bulgaria, Malta, Poland and Romania were sponsored by WHO. A five-day course in Azerbaijan for Russian speaking participants with simultaneous translation was sponsored and coordinated by WHO and the European Programme for Intervention Epidemiology Training (EPIET) whose lecturers contributed to the training. Over 40 participants were trained in field epidemiology through a set of case studies.

Translation of 2 important books for infectious disease epidemiologists has been requested and will become available in the Russian language in 2002.

During 2001 a surveillance network, comprising 17 Central, Southern and Eastern European countries, as well countries from the Baltic states (CCEE-Baltic) was created. These countries have agreed to form an electronic network to reinforce mutual collaboration, coordination and communication on infectious disease surveillance and control.

The Regional Office has developed several activities to identify new partners or strengthen relationships with long standing partners. Substantial collaboration has been established with the French Government and two inter-country projects have been funded through the Ministry of Health. One project to strengthen CCEE-Baltic Network’s activities and second project for seven countries in South East Europe (Stability Pact).

Relationships have been strengthened with a number of other partners, notably the United States Agency for International Development (USAID) – mainly for HIV, TB and Immunization programs, the World Bank – joint missions to a number of countries to review national projects on communicable disease surveillance –, Department For International Development agency (DFID) from the United Kingdom as well as the Open Society Institute of the Soros Foundation both in the area of TB and HIV programmes. WHO/EURO has a partnership and cooperation with the Task Force for control of infectious diseases in the Baltic Region, a project created by the Nordic Council of Ministers among the nine Nordic and Baltic countries and the North-West of the Russian Federation.

With regard to recent events and threats on the intentional use of biological agents the Regional office has undertaken several activities to both analyse and respond to this additional risk to the health of the Member States populations. In November 2001, a WHO consultation on Prevention and Management of Substance Terrorism against Water Services was attended by over 30 specialists in this area. A final report will be available in the near future.

During 13–14 December 2001 the Second Futures Forum for High Level Decision Makers took place in WHO’s Regional Office in Copenhagen. Focus of the meeting was to discuss the cooperation in the face of terrorism and to assess the risks associated with a biological, chemical
or nuclear terrorist attack and to identify the necessary planning, service and communication arrangements required to ensure timely and adequate response. A final report will be available in the future.

Two additional expert consultations will take place in the spring of 2002, one on food safety and food as a vehicle for intentional threats and a second on the use of chemical agents.

Refer to presentation of Dr Bernardus Ganter – WHO/EURO

Feedback from the WHO Consensus meeting on surveillance of infectious diseases

The Grottaferrata Meeting held in April 2000 set the scene for strengthening national surveillance, early warning, epidemic preparedness and response in the European Region. The objectives were to develop a common language for an integrated, action oriented, surveillance systems, streamline support to national surveillance and response, and promote communication, cooperation and coordination between countries. Five areas for strengthening were recommended at that meeting:

Surveillance and early warning, epidemic preparedness and response, capacity building, networking, and partnerships.

Refer to presentation of Dr Donato Greco – Istituto Superiore di Sanità, Italy

WHO integrated approach for strengthening of epidemiology and laboratory support for the surveillance of communicable diseases

At the global level WHO has further expanded and made operational the Global Outbreak Alert and Response Outbreak Network (GOARN) to ensure global health security. This network, which includes 72 international partners from public health institutes, humanitarian organizations and agencies, has strengthened the area of epidemic alert (detection, verification, communication) and the response (risk assessment, technical cooperation, epidemiological investigation, research, communication). This serves to further strengthen preparedness (assessment of national systems, planning, training, stockpiles, research and communication). Guidelines have been drawn up to ensure the appropriate collaboration between the 72 institutes, agencies and organizations, involved in the Global Network and ensure the Global Health Security. The recent events have prompted WHO to review guidelines for public health response and preparedness to biological and chemical weapons.

In collaboration with countries and partners, WHO has developed a four-phased model for strengthening national surveillance, early warning and response systems. This model views all communicable disease surveillance and response systems in countries as being part of a national surveillance system, and as such promotes strengthening in an integrated manner for greater effectiveness and efficiency.

This model for integrated disease surveillance consists of carrying out a critical review of the capacity of existing surveillance and response systems to effectively and efficiently achieve their objectives, and promotes the rational use of resources between systems. The second phase consists of developing a national plan of action to deal with gaps identified, address priority reform needs and design efficient surveillance systems. The third phase is the implementation of reforms, through strengthening of the core functions of surveillance (data collection, confirmation, transmission, analysis and interpretation and use) providing standards, strengthening
communication systems, laboratory strengthening, training and disease specific interventions. The last phase of this model is monitoring and evaluation of the implementation of the reform. 

WHO supports countries in implementing this model for integrated disease surveillance. WHO/HQ/CSR/NCS supports the critical reviews, plan of action development, and monitoring and evaluation of the reform process, and as well as the development of standards and norms. The CSR/Lyon office supports countries in building their laboratory capacity and epidemiological training.

The CSR/Lyon has as its main activities laboratory and epidemiology strengthening. The laboratory capacity building has so far focused on 7 countries in the African Region and currently on 7 countries in the Eastern Mediterranean region. The next cohort would be from Eastern European Countries. Support to training is through field epidemiology training, TEPHINET, and the FETPs. Biosafety activities are also supported by Lyon.

Refer to presentation of Dr Diego Buriot – WHO Lyon Centre

3.2 Country Reports

Adaptation of national surveillance systems to meet European Union requirements may need legal, organizational, and structural changes, as highlighted by the reform of the surveillance system in France. The European network for surveillance is coordinated by the European Commission Directorate General SANCO through a network committee constituted of two members per country. There is a need to further strengthen coordination within the EU, as well as with other agencies and institutions such as WHO, and projects such as the International Health Regulations revision and implementation.

Refer to presentation of Dr Jean-Claude Desenclos – Institut de Veille Sanitaire, France

The World Bank has been key in supporting surveillance strengthening efforts in countries like Kyrgyzstan, but WHO needs to support countries in identifying priorities and lead the reform process. Priorities in Kyrgyzstan include the improvement of existing surveillance and response systems, developing networks, and elaboration of standards for surveillance and control, laboratory strengthening, and regulatory documents. Bioterrorism is a threat that needs strong national surveillance and early warning systems to contain. Laboratory systems need to be harmonised to correspond to those in the EU.

Refer to presentation of Dr Ludmila Steinke – Ministry of Health, Kyrgyzstan

Moldova, after evaluating the national surveillance system, identified gaps in disease prioritisation for early warning and routine surveillance, lack of standards for surveillance, outdated laboratory methods and inadequate capacity. A task force of experts has been created to determine priorities, develop standard protocols and guidelines, integrated forms, and assignment of roles and responsibilities for each level.

Refer to presentation of Dr Mihai Magei – Ministry of health, Republic of Moldova

Romania, after and in-depth evaluation supported by WHO/EURO, WHO/HQ and partners, has identified development of standards, strengthening of the Early Warning Systems, and sharing of
information and comparable data as priorities. Elaboration of a national plan of action bringing together key players in the country from various levels is envisaged.

Refer to presentation of Dr Adriana Pistol – Ministry of Health, Romania

IV. Early Warning Systems (EWS) and Intentional Release of Biological Agents (IRBA)

4.1 Regional and international perspectives

Early warning systems have been characterised as “surveillance systems on steroids” and should operate as part of the broader national surveillance system. The infrastructure needed are first of all people, not hardware. These systems need organization of systematically trained people, good communication systems, the laboratory and appropriate stockpiles. The USA’s Centers for Disease Control and Prevention (CDC) has developed an EWS called Epi-X moderated by CDC staff. Likewise, there is a Health Alert Network, with a Web site, where documents are regularly posted and information shared. Syndromic, enhanced or “drop in” surveillance is also used for high profile events and mass gatherings.

Refer to presentation of Dr Eric Mintz – Centers for Disease Control and Prevention, USA

The EU has carried out a survey on preparedness of countries for bioterrorism. Bioterrorist threats in Europe were hoaxes and should be considered as a “preparedness exercise” from which three lessons can be drawn; because of inadequate preparedness planning and funding arrangements, Europe was not ready in October 2001 to respond to bioterrorism. Although European institutes quickly reacted and adapted their priorities to a new type of threat, they need an adequate and sustained support from national governments to maintain their overall capacity. The recent crisis demonstrated the need for an increased investment in epidemiology training programs and the establishment of a technical coordination unit for international surveillance and outbreak response with the European Union. Governments need to invest in European public health institutes to maintain sustained capacity.

Refer to presentation of Dr Bruno Coignard, Institut de Veille Sanitaire, France

4.2 Preparedness for IRBA: Country perspectives

The creation of a new law on surveillance systems in Germany has resulted in a reduction in the number of reported diseases, clearly identified laboratory reported diseases, and regulated fast track reporting. 9 diseases are immediately reported to the EU network and WHO. The Robert Koch Institute has developed the “SurvNet” surveillance software for data management. The new surveillance system is more responsive for early warning of diseases.

Refer to presentation of Dr Gerard Krause – Robert Koch Institut, Germany

In Poland, a special group for IRBA was formed. This group examined the preparedness of the country in terms of the capacity of hospitals to accommodate massive infectious disease casualties, the laboratory capacity to diagnose potential agents for bioterrorism, coordination of services, vaccines and stockpiles, as well as border issues. Recommendations have been made
with regards to the characterisation of agents, procedures in case of IRBA management of suspected mail, notification and cooperation systems, reference laboratories, and safety procedures.

Refer to presentation of Dr Andrzej Zielinski – National Institute of Hygiene, Poland

Conventional terrorism, chemical, radioactive as well as bioterrorism exist. The **Russian Federation** has laws relating to terrorism with a federal counterterrorism commission, replicated at regional and local levels. Public Health and medical response is enhanced through epidemiological capacity building for outbreak investigation including those of unknown origin, laboratory capacity, medical management, training and education and information and communication.

Refer to presentation of Dr Yuri Michailovich Fedorov – Ministry of Health, Russian Federation

In **Sweden** three main principles for preparedness to microbiological emergencies have been applied:

1. Build on existing structures for surveillance and control
2. Emergency planning integrated into ordinary, everyday systems
3. Cooperation between sectors with different areas of responsibility

All sectors involved in routine surveillance and control of infectious diseases also have clearly defined responsibilities in emergencies. Just as in routine mode, response to emergencies is coordinated by the National Board of Health and Welfare. A special centre for microbiological preparedness was created two years ago, with four main areas of work, notably, the development of diagnostics, epidemiology database and response team, research into molecular virology, and high-isolation patient care.

Refer to presentation of Dr Johan Gieseke – Institute for Infectious Disease Control, Sweden

In **Turkey**, there is no official national “IRBA” specific preparedness and response plan, except military plans and teams. In case of a threat or actual event, based within the Ministry of Health, temporary teams are established. These teams cover 24 hours, 7 days a week, with 12 hour shifts. They are responsible for central coordination/supervision of provincial health authorities and mobile teams, data collection, daily analysis, reporting and response. From the recent experiences in Turkey, lessons learnt include the need for a flexible multi-sectoral national response plan, a central crisis response team, and a number of well trained and well equipped, mobile field teams.

Refer to presentation of Dr Unal Ertugrul – Ministry of Health, Turkey

**V. Early Warning and Response Networks**

The **Global Alert and Response Network** (GOARN) was established in 1999. It is a technical partnership representing the pooled resources of 72 institutions and existing networks, focused on rapid identification, characterisation and containment of epidemic threats. The network
ensures coordinated mechanisms for outbreak alert and response, complements and strengthens existing networks and relationships. Recent achievements include field support to the Ebola outbreak in Uganda, to the outbreak of Crimean Congo Haemorrhagic Fever in Kosovo, and an unknown disease in Bangladesh. The network is currently seeking country partnerships, and encourages countries to identify national institutions for participation in network activities.

Refer to presentation of Dr Mike Ryan – WHO Headquarters

**WHO’s response to bioterrorism**

WHO has long been concerned for the public health consequences of biological and chemical weapons. In May 2001, the World Health Assembly requested the Director General “to devise relevant international tools, and to provide technical support to Member States for developing or strengthening preparedness and response activities against risks posed by biological agents, as an integral part of their emergency management programmes. More recently, the Executive Board specifically discussed the threat posed to public health by biological, chemical and radio-nuclear agents, the resulting resolution EB109.R5 is going to be submitted to the WHA in May 2002 for adoption.

The threat posed by the use of biological and chemical agents by armed forces of states has changed in the last decade. The risk of a non-state actor using these weapons remains a possibility in most areas of the world. The threat posed to public health by biological and chemical weapons can be describe as a “low probability, high consequence events”; potentially leading to disastrous public health consequences, with high mortality and morbidity. The magnitude of the threat posed by these weapons depends on circumstances particular to a given country. There can be no general rule: national authorities need to make their own threat assessments. The fact that there is a vulnerability does not necessarily mean that there is a threat. Preparedness plans should, therefore, be developed using risk-management principles. The relative priority of these threat should be accorded by comparing them with others public health risks. The preparedness to deliberate releases can be greatly increased by strengthening the public health infrastructure. The targeting by countries in their preparation of a limited but well chosen group of agents will help facilitate coordinated planning efforts involving national and local emergency response and public health services. There is the need, therefore, to develop objective criteria for selecting these agents in order to identify priorities.

In response to increasing requests from Member States for technical advice on how to improve preparedness to possible releases of biological and chemical weapons to cause harm, WHO has been strengthening its activities in this field: information on these actions is available at the following Web address: [http://www.who.int/emc/deliberate_epi.html](http://www.who.int/emc/deliberate_epi.html)

Refer to presentation of Dr Ottorino Cosivi – WHO Headquarters

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**The EU response**

In 1998, the EU created a network for epidemiological surveillance (decision 2119/98), and in 1999, the Early Warning and response system. A new public health strategy was developed in the year 2000. The EU surveillance system consists of a network of networks and coordinating structures, an early warning and response network, disease specific networks and basic building blocks, notably the EPIET, Euro-surveillance and IRIDE. The purpose of the EU rapid response is the enhancing of existing EU expertise, support to member states, facilitation of the organization of investigations, addressing of rapidly emerging epidemiological problems, identification of risks, proposing prevention and control measures.

Many public health issues could be identified: lack of adequate resources at national level to address EU activities, the need to improve laboratory capacity, and for rapid response. There is need for a coherent approach, and a service function in public health. There is a need for national capacity building and trust building. With relation to bioterrorism, well functioning communicable disease surveillance and outbreak investigation capacity provides the basis for detection and management of biohazardous events, and collaborating with and between other authorities is necessary. EU laboratory capacity is crucial. There is an urgent need for a strong technical coordination unit at the EU level, building EU expertise and permanent EU financing mechanisms.

*Refer to presentation of Dr Frank Van Look – Institute of Public Health, Belgium*

**CCEE Baltic Network**

One of WHO’s main means of creating a global surveillance system has been facilitation of the development of a “network of networks” which links together existing local, regional, national and international networks of laboratories and medical or surveillance centres into a super surveillance network. In the European Region, 51 Member States should be connected in the future, but for the time being only one sub-regional network actually works in a systematic manner, cf. the European Community Network. Since December 2000, the countries of central and eastern Europe (CCEE) and the Baltic States have met and established the will to communicate surveillance data on infectious disease within the 17 country participants. To date, two specific networks have been proposed by the CCEE-Baltics collaboration: an early warning and response system, and a surveillance network for measles elimination, including a weekly reporting system.

To support information sharing and monitoring of communicable diseases, the Communicable Disease Surveillance and Response (CSR) Programme and the Informatics Support unit (ISS) of the WHO Regional Office for Europe have developed the **Computerized Information System for Infectious Diseases** (CISID – [http://cisid.who.dk](http://cisid.who.dk)). Data provided by Member States to the Communicable Disease Unit are received in a variety of formats through different channels and reflect national data collection criteria and methods. CISID eventually aims to monitor some infectious diseases by first (and in some cases, second) administrative level within the European Region, and provide a detailed description of clusters of cases by time, place and person.

The WHO Regional Office for Europe acts as secretariat to the CCEE-Baltics Network, supports the Network meetings, and gives technical assistance towards realization of an Internet-based solution. This system provides the participants of the network, with a means of communicating
information of potential threats to public health to other network members in a secure and unofficial forum. The content of messages posted to the network are stored in the secure area of the CCEE-Baltics Network on the CISID Server located at the WHO Regional Office for Europe in Copenhagen, Denmark. All messages and replies are accessible only by registered members. Members of the CCEE-Baltics network are entitled to freely post messages to the network or reply to messages posted by others. Messages and replies are viewable at any time in the Message Forum link.

VI. Partnerships

The EU has currently put in place mechanisms to cooperate with the CCEE and NIS member States in developing effective programmes to combat communicable diseases.

PHARE is able to provide financial assistance to partner countries until they reach the stage where they assume the obligations of membership. Priorities are economic infrastructure, social infrastructure and services, institution building, strengthening of democratic institutions and public administration. PHARE has become radically accession-driven. EuropeAid implements external aid instruments of the EC. The formalisation of bilateral relations between the EU and partner countries is achieved through the negotiation of Partnership and Co-operation Agreements (PCAs), now in force with ten of the Eastern European and Central Asian countries. TACIS is part of a complex and evolving relationship with each country. TACIS becomes more strategic with the implementation of PCAs and the EU enlargement process. CARDS follows essentially same procedure as TACIS’ regarding programming and tendering. Examples of priorities per country are humanitarian assistance, democratisation, social cohesion, development, health care reform, health financing, etc. The ECHO programme finances emergency assistance and relief to victims of natural disasters or armed conflict outside the EU. Operations are carried out by NGOs and specialized organizations.

PHARE, TACIS and CARDS are the result of a consultation between governments of accession countries or partner countries and the EU. Projects specifically dedicated to specific diseases are atypical or are included into broader health sector or social programmes. Since many Multi-annual Programmes do provide for assistance in the organization, administration and financing of the Public Health sector, projects specifically related to the fight against intentional epidemic risks may be contemplated. As the Country strategic papers are the result of a bilateral consultation, and as the topics of the present conference are particularly actual, future multi-annual programmes may provide for support to more specific actions in the line of the topics discussed at this meeting. The partner countries for PHARE would be associated to the policy that is being followed by the EU in this field. ECHO is a reactive programme that might go into action in case of intentional epidemics but would not typically work at establishing preventive or alert systems.

Refer to presentation of Dr Massimo Ciotti – WHO/EURO

Refer to presentation of Dr Vladimir Kozyreff – EuropeAid
VII. Capacity building

Participants to the meeting were assigned to four different Working Groups with the following objectives and tasks:

**Working Group 1** – Strengthening Surveillance and Early Warning System at National Level. Identification of needs for the next two years to improve the EW and Response mechanisms of the national surveillance systems in order to cope with expected and unexpected events.

**Working Group 2** – Strengthening international Early Warning System and Networks. Identification of needs for the next two years to improve the EW and Response mechanisms at international level. Development of recommendations on ways to improve collaboration, coordination and communication of international networks and on principles and rules that should be established for alert, verification and response. Examining the impact of joining an international EWS on national Policies, Guidelines and norms, Structure and management, Legislation, Resources.

**Working Group 3** – Strengthening Laboratory and Information Technology support to National Surveillance. Identification of needs for the next two years to improve the capacity and integration of laboratory support to surveillance systems. Identification of needs to improve the support of IT at all levels of the system.

**Working Group 4** – Human resources development: epidemiology training. Identification of needs for the next two years to improve the capacity of epidemiologists to detect, investigate, interpret and control outbreaks, and to better manage the surveillance system.

7.1 Early warning systems at national level

Strengthening surveillance and early warning at the national level is a priority. In order for the public health systems of Member States to be able to address the increasing challenges posed by both naturally occurring emerging diseases and intentionally caused epidemics there is an urgent need for a strong political commitment at the highest national and international levels matched by the provision of adequate resources. In addition, the need for close collaboration and coordination among countries is essential to meet these challenges.

Working Group Recommendations:

7.2 Early warning systems and international networking

It is important to identify within international networks and early warning systems, those who need to receive information for action; the operational needs, the trade and travel issues, as well as the ethical and political dimensions. The assessment could be based on EU criteria, (2119/98 decision). Data analysis needs to be based on the local data. The reporting of syndromic or specific information needs to be clarified. In the case of the former, this should be followed by specific information. Thresholds may vary. Dissemination of information should be based on certain rules. The public health institutes and ministries of health are not usually the first to know about the outbreaks, and this needs to be taken into account.
The question as to whether surveillance data or alert data should be reported needs to be clarified. This could be based on the EU definitions. Coordination and assessments should be based on the network horizontal structures but could also be based on pyramidal structures.

Models of response could be based on that of the Global Outbreak Alert and Response Network (GOARN) or the EU.

7.3 Laboratory support and information technology

Consideration was given to the laboratory and the data derived from routine diagnostic and reference work. Private laboratories were considered and the issues of interaction with the public laboratories, as well as the poor contribution of many private laboratories to local and national surveillance. There may be a need to require private laboratories to report certain results to public health authorities for surveillance purposes, perhaps as part of their accreditation processes and for licensing. There are several levels of laboratory services ranging from local to reference laboratories. The periodicity of obtaining data from the different levels and the degree of urgency for obtaining data, equipment and reagents, standardization of methods and quality assurance issues, were considered. The need to establish a close working relationship between epidemiologists and laboratory personnel was also discussed.

7.4 Human Resource Development: epidemiology training

Review and further definition of training programmes may be required in many countries. Basic epidemiology is taught in medical school, but the curriculum may need attention. Specialisation exists in some countries. Long-term intervention epidemiology capacity is needed in much of the Region. Skills of intervention field epidemiologist should include the ability to plan, design and run surveillance systems; use laboratory data for surveillance, outbreak investigation and research. In addition to the methodological capabilities, epidemiologists should have good management and communication skills.

Training needs a multi-disciplinary approach, and should be task oriented, with learning by doing aspects, with a snowball effect, and training of trainers. The international input is a key factor of any programme developed. There is a need to associate general epidemiology as well as communicable diseases, including the deliberate release of biological weapons. Many existing national and international resources and experiences can be used.

Challenges include linking training with communicable disease surveillance and control programmes, and the selection of appropriate specific case studies and teaching examples. Success will be dependent on each country becoming the owner of the initiative.

VIII. Conclusions and Recommendations

General conclusions and recommendations

1. Old diseases are re-emerging, new diseases appear and the intentional use of biological, chemical and nuclear agents is a threat to the regional health security. It was acknowledged that surveillance and response systems and laboratory capacity to address these threats is deficient in many countries.
2. Delegates committed themselves to promoting a critical review of their national surveillance systems and laboratory services, and to seek to address any weaknesses identified through training and, where possible, increasing capacity. It was recognised that this would be essential to ensuring a timely and optimal response to epidemic threats.

3. Progress has been made during the last 22 months after the Grottaferrata meeting of April 2000 and especially in the area of integrated databases, network building between national surveillance institutes, review of national programs, development of training opportunities for intervention epidemiology both at national and international level.

4. It must be recognized that the WHO European Regional Office has limited financial resources to implement all the recommendations of the Grottaferrata meeting and additional work will be needed to increase the funding of the regional programme so that more progress can be made during the next 2 years.

5. In view of these financial limitations, coordination is even more critical. Network initiatives such as the CCEE-Baltics Network collaboration on early warning and measles surveillance offer economical solutions to sharing data, information, experience and can contribute to strengthen national surveillance systems.

6. Other specific networks could be created to exchange information on legislation, reform of surveillance systems, training curricula or disease specific and relevant for a number of partners in such networks. WHO should stimulate and facilitate this process, including the promotion of a network for Russian speaking Member States.

7. Member States and WHO are encouraged to establish and develop computer-based information systems for national laboratory and epidemiology programmes.

**Recommendations to Member States**

1. Member States should review the strengths and weakness as well as the needs for the improvements of the current national surveillance systems.

2. Countries should be encouraged to share information and guidelines that have recently been developed on surveillance methods, evaluation, standards and response to particular disease or bioterrorist threats. The use of the World Wide Web or reporting through the WHO Regional Office, would be ways of disseminating this information.

3. In many countries the collaboration between microbiologists and epidemiologists is sub-optimal and not a routine practice. Countries are urged to elaborate strategies for developing closer working relationships between these two public health disciplines.

4. Member States are encouraged to strengthen cooperation and collaboration between human and veterinary diagnostic laboratories as well as medical and veterinary epidemiologists.

5. All countries should identify potential threats and review the preparedness to those. This assessment should not only include the health sector but also those such as police, civil
defence, military among others. Preparedness plans should focus on improving coordination between different sectors and agencies that would be involved in emergency response.

6. Countries should advocate for public health as a priority for funding opportunities from EU funded Aid Programmes (such as PHARE and TACIS) as well as from others development agencies such as the World Bank. Success in obtaining funds is closely linked to a country’s determination to include public health as a priority.

7. Clear benefits have been demonstrated from collaborations between countries through the establishment of networks, such as the disease specific networks in the European Union. They have provided the means for earlier detection of health threats and earlier warnings, including earlier recognition of international outbreaks when there are just small number of cases in several Member States.

8. Networks have been shown to be very effective when an international coordinated health response is required. Countries are encouraged to identify national institutes that could be partners of the Global Outbreak Alert and Response Network (GOARN) coordinated by WHO/EURO.

9. Emergency plans and early warning systems both for natural or intentionally caused outbreaks should be integrated with already existing surveillance systems rather then build new systems.

**Recommendations to WHO**

1. WHO should make available relevant documentation on preparedness and response to disease outbreaks or intentional release of biological agents, at least in English and in Russian languages.

2. WHO should further support a systematic review of surveillance and response functions within the existing structures of countries’ surveillance systems.

3. WHO should assist in the process of standardization of public health laboratory procedures, so that both quality and comparability will be improved.

4. WHO is currently working with 7 countries to strengthen their laboratory surveillance and the WHO Office in Lyon will organize a course for these countries during 2002. WHO is encouraged to evaluate the success of this course and determine if it is possible to extend the training to an additional group of countries.

5. WHO is urged to set up a two to three week international training course for intervention epidemiology as soon as possible. Countries are encouraged to reserve funds for such training both from national budgets and to seek additional monies from other sources such as the European Commission, UNICEF and other funding agencies.

6. Involving public health laboratories is crucial to effective surveillance. WHO is urged to develop guidelines for minimal requirements, quality and standardization of procedures.
Annex 1

SCOPE AND PURPOSE

It is recognized that communicable disease continues to be a major source of illness and death globally.

In 1995, the World Health Assembly adopted WHA48.13 resolution on new, emerging and re-emerging infectious diseases and WHA48.7 resolution on the revision and updating of the International Health Regulations. The Health Assembly was fully aware that the strengthening of epidemiological and laboratory surveillance and of disease control activities at national level is the main defence against the international spread of communicable diseases.

In 2001, the 54th World Health Assembly adopted resolution WHA54.14 “Global Security – epidemic alert and response”. The resolution emphasizes 3 areas of work:

1. Revision of the International Health Regulations, including criteria to define what constitutes a health emergency of international concern;
2. Development of a global strategy for containment and, where possible, prevention of antimicrobial drug resistance;
3. Collaboration between WHO and all potential technical partners in the area of epidemic alert and response, including relevant public sectors, intergovernmental organizations, nongovernmental organizations and the private sector;

In the European Region, a consensus meeting was held in Grottaferrata, Italy, in April 2000. Twenty-eight member states from former Soviet Union and Central Europe developed 36 recommendations for long-term investments on strengthening of infectious disease surveillance. This included enhancing surveillance systems, outbreak preparedness, capacity building, creation of networks and international collaboration as well as building partnerships.

Recent international events have made clear that the international community must address the Intentional Release of Biological Agents (IRBA) as a public health priority. The WHO Executive Board retreated in Florence on 13th of November and agreed on critical areas for development of activities such as strengthening of surveillance systems, early warning of health events caused by natural or deliberate use of biological agents, specifically in respect to point 3 of resolution WHA54.14.

Therefore, it is evident that, in the European region, there is a need to identify ways to strengthen national and international capacities to early detect and respond to health threats that have emerged in this new context.

Objectives of the meeting:

1. To review the recent development of public health surveillance systems’ capacity to early detect and respond to natural and deliberate occurrence of epidemics.
2. To identify the needs and agree on the mechanisms to strengthen public health laboratory and national surveillance systems’ capacity to early detect and respond to epidemic threats.
3. To identify and agree on the ways national early warning systems can contribute to regional and global alert and response networking initiatives.
Annex 2

PROGRAMME

Wednesday, 6 February 2002

08:00–09:00 Registration

09:00–09:30 Opening session
D. Buriot, WHO/CSR, Lyon
B. Ganter, WHO/EURO
M. Girard, Fondation Mérieux

09:30–09:45 Chairman’s address
C. Bartlett, United Kingdom

Plenary session 1: Recent developments in National and Regional Surveillance Systems for Communicable Diseases

09:45–10:00 Progress report on WHO’s European Region
B. Ganter, WHO/EURO

10:00–10:15 Feedback from the WHO Consensus meeting on surveillance of infectious diseases, Grottaferrata, Italy, April 2000
D. Greco, Italy

10:15–10:30 WHO integrated approach for strengthening of epidemiology and laboratory support for the surveillance of communicable diseases
D. Buriot, WHO/CSR, Lyon

10:30–11:00 Coffee break

11:00–11:30 Plenary discussion on regional developments

Country reports

11:30–11:45 Adaptation of national surveillance to meet European Union requirements
J.C. Desenclos, France

11:45–12:00 Development of the national surveillance system in the context of the reform of the sanitary and epidemiological surveillance system
L. Steinke, Kyrgyzstan

12:00–12:15 Evaluation of the national surveillance system and plans for the future
M. Magdei, Republic of Moldova

12:15–12:30 Evaluation of the national surveillance system and changes planned in view of EU accession
A. Pistol, Romania

12:30–13:00 Plenary discussion on national developments

Lunch

Plenary session 2: Early Warning Systems (EWS) and Intentional Release of Biological Agents (IRBA)

14:00–14:30 CDC efforts in strengthening EWS
E. Mintz, CDC, USA

14:30–15:00 European Union’s public health institutes preparedness for IRBA
B. Coignard, France

15:00–15:30 Plenary discussion on EWS and IRBA

15:30–16:00 Coffee break
Country reports: preparedness for IRBA

16:00–16:15 Germany G. Krause
16:15–16:30 Poland ? . Zielinski
16:30–16:45 Russian Federation J. Fedorov
16:45–17:00 Sweden J. Giesecke
17:00–17:15 Turkey U. Ertugrul

17:15–17:45 Plenary discussion on country preparedness for IRBA

Thursday, 7 February 2002

Plenary session 3: Early Warning and Response Networks

09:00–09:20 WHO global outbreak alert and response network M. Ryan, WHO/HQ
09:20–09:30 WHO Executive Board resolution on IRBA O. Cosivi, WHO/HQ
09:30–10:00 European Union rapid response system for threats to public health F. Van Loock, Belgium
10:00–10:30 CCEE-Baltic Network: pilot testing of an Early Warning System (EWS) M. Ciotti, WHO/EURO

10:30–10.45 Coffee break
Official address speeches
10:45–11:00 Communicable Diseases: Global situation D. Heymann, WHO/HQ
11:00–11:15 Address by WHO Regional Director for Europe M. Danzon
11:15–11:30 Welcome message from the Minister of Health of France B. Kouchner
11:30–12:00 Feedback from the survey on EWS in Europe and introduction to working groups M. Ciotti, WHO/EURO

12:00–14:00 Lunch

Plenary session 4. Capacity building

14:00–17:30 Working groups (coffee break during the working groups sessions)

Working group 1: Core function: early warning systems at national level
Facilitators will be announced during meeting

Working group 2: Core function: early warning systems and international networking

Working group 3: Support function: laboratory, – information technology

Working group 4: Human resource development: epidemiology training
Friday, 8 February 2002

**Plenary session 5: Conclusions**

09:00–09:15  Ministry of health, France  
A. Pinteaux

09:15–09:45  Statements by representatives WHO’s partner organizations  
H. Walierius, EU/DG SANCO  
V. Kozyreff, EuropeAid

09:45–10:30  Reports from working groups and recommendations  
One speaker from each group

10:30–11:00  Coffee break

11:00–12:00  Reports from working groups and recommendations (cont’d)  
WHO/EURO

12:00–12:30  European Regional office response to the recommendations of the working groups  
WHO/EURO

12:30–14:00  Lunch

**Plenary Session 6: Discussion and closure**

14:00–16:30  Individual discussions  
WHO and country representatives

16:30–17:00  Closing session  
B. Ganter, WHO/EURO  
G. Rodier WHO/HQ  
Touraine, Deputy Mayor of Lyon
Annex 3

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